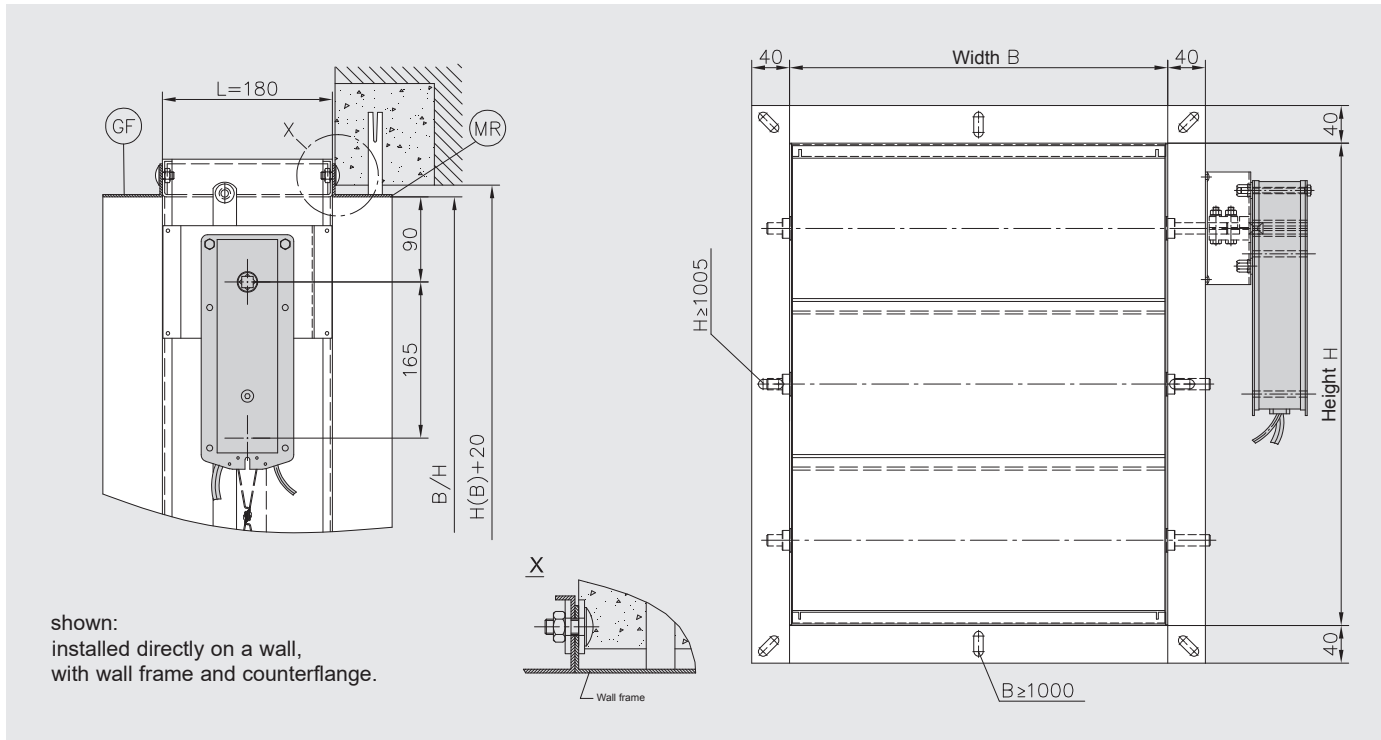




JR smoke protection dampers
Technically approved multileaf dampers

JR smoke protection dampers

Description, sizes



JR smoke protection damper in accordance with "Guideline on Fire Protection Requirements Pertaining to Ventilation Systems" (Lüftungsanlagenrichtlinie - LÜAR).

With U-shaped frame 180 mm in installation length, comprising connection flanges, blades with metal sealing and blade couplings via linkage located outside the air stream. Made of galvanised sheet steel, blade bearing in brass bushings. With electric spring return actuator for 24 V AC/DC or 230 V AC and with limit switches for CLOSED and OPEN damper blade positions.

- General Building Inspectorate Approval: Z-78.4-40
- Dimensions:
 - Widths: 200 mm to 2000 mm
 - Heights: 180 mm to 1995 mm
 - Length: 180 mm

For installation independent of the direction of airflow:

- on or remote from walls and ceilings
- on or between ventilation ducts made of non-combustible substances with > 1000°C melting point (e.g. sheet steel)

Axis position of blades horizontal or vertical. → see page 6

Installation is generally made in ventilation stations or in ventilation ducts. They are allowed in ventilation stations as shut-off devices to the immediately adjoining floors or fire compartments. → see page 4

Smoke protection dampers must close via their spring return actuator when there is smoke in the ventilation ducts. To this end they are controlled by a technically approved smoke detector, for example by an OR31 or OR32 smoke detector.

Available dimensions: B x H

Width B [mm]	Height H [mm]
200	180
300	345
400	510
500	675
600	840
700	1005
800	1170
900	1335
1000	1500
1200	1665
1400	1830
1600	1995
1800	
2000	

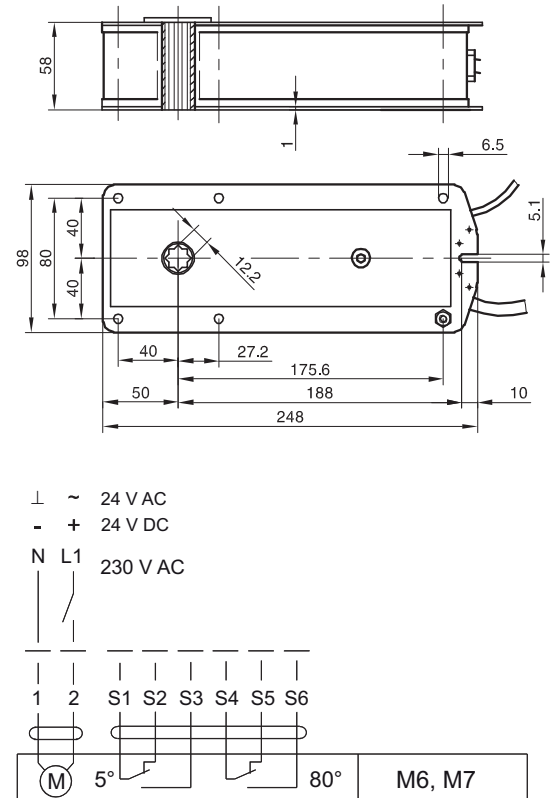
All dimensions can be combined

JR smoke protection dampers

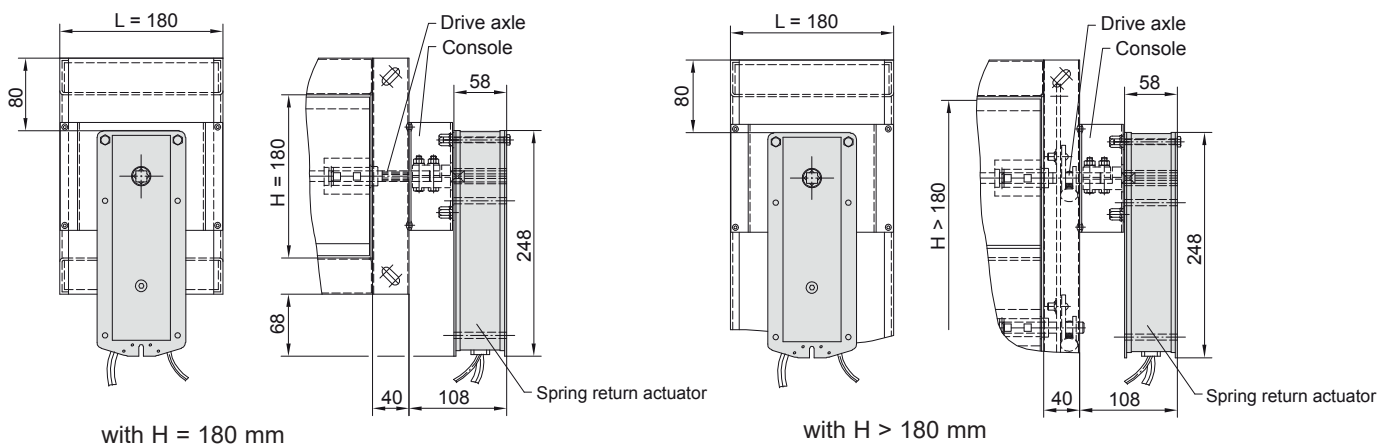
Technical data for spring return actuators, and OR31 and OR32 smoke detectors

Spring return actuators	M6	M7
Supply voltage	230 V AC	24 V AC/DC
Tolerance at 50 Hz	± 14%	± 20%
Tolerance with DC		- 10% to + 20%
Torque		
Motor	≥18 Nm	
Spring return	≥12 Nm	
Runtime for 90°		
Motor	140 s	
Spring return	~16 s	
Connected load	12.5 VA	10 VA
Power consumption		
when opening	8 W	7 W
in stop position	3 W	2 W
Degree of protection	IP 54	
Connection cable 0.75 mm ²	approx. 1 m long	
Motor	2-wire	
Auxiliary switch	6-wire	
Ambient temperature	- 30°C to +50°C	

M6, M7 with integrated limit switches



Mounting of spring return actuators



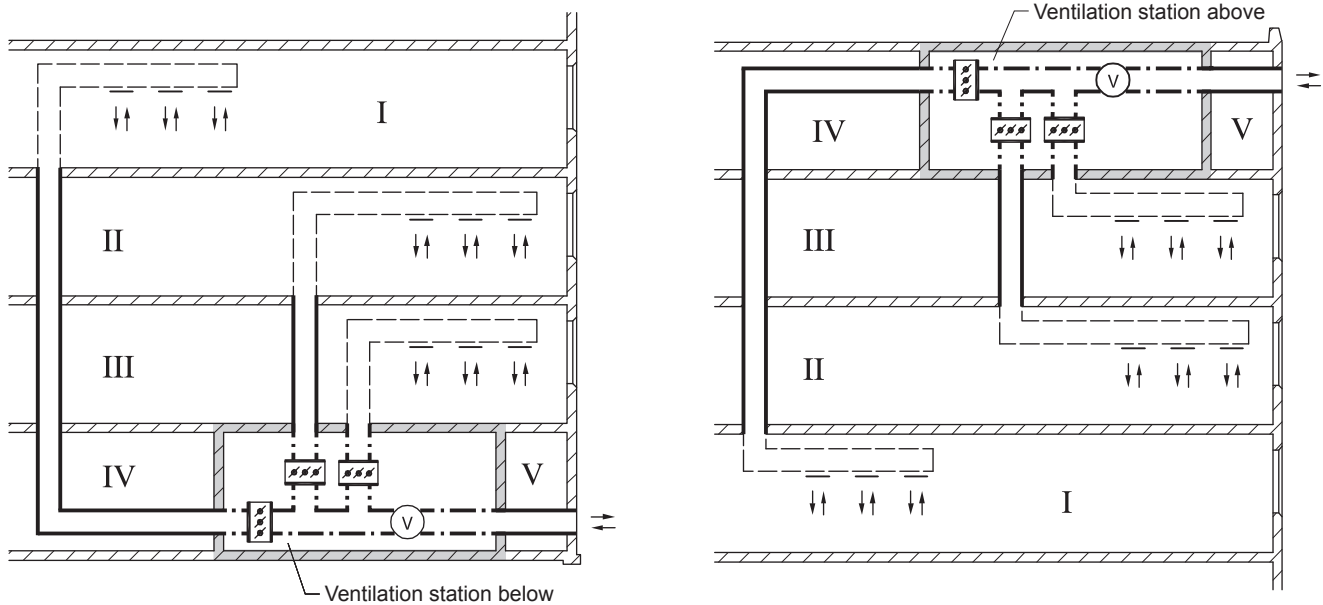
OR31 and OR32 smoke detectors

⇒ see User Manual 5.10 or 5.11 and General Building Inspectorate Approval Z-78.6-123

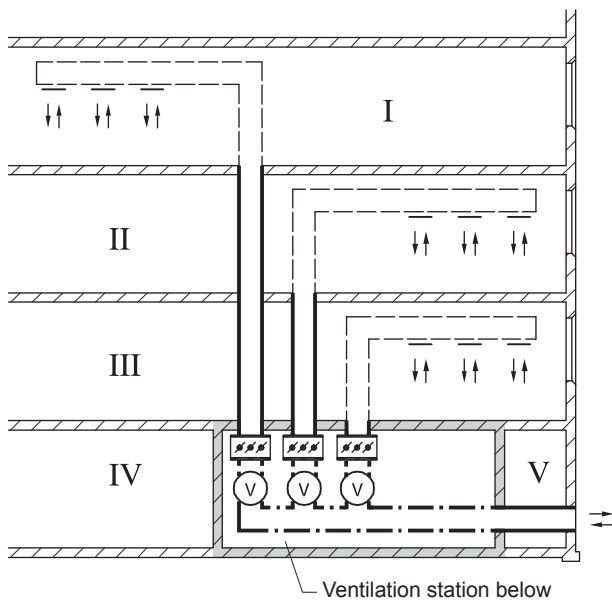
JR smoke protection dampers

Use in ventilation systems with the same ducts for outside air or outgoing air

• Ventilation systems with separate main lines and the same fan



• Ventilation systems with separate main lines and separate fans



- 1 Ventilation ducts with a fire resistance period corresponding to the wall or ceiling to be protected
- 2 Ventilation ducts without fire resistance period
- 3 Ventilation ducts made of non-combustible materials (DIN 4102-1) with a melting point > 1000°C

- Vents for supply air or exhaust air
- Fans can be arranged in front of or behind the smoke protection dampers
- Smoke protection dampers must close if the fans stop working

Ventilation ducts on smoke protection dampers in ventilation stations are available in types 1 or 3.

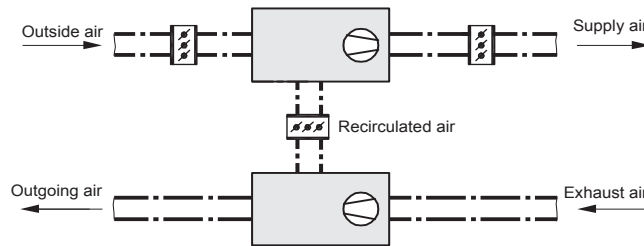
I, II, III, IV, V floors, fire compartments, fire areas

JR smoke protection dampers

Application

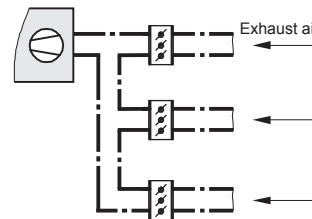
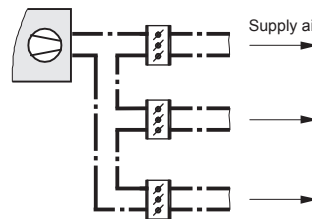
Smoke protection dampers

are used to prevent non-permitted transfer of smoke from the outside air or from the recirculated air of a building in supply air lines. They are generally installed in outside air vents, in outside air lines, recirculated air lines or in supply air lines.



Smoke protection dampers should be installed in ventilation stations if they exist.

Fire compartments or floors which have individual ventilation ducts to the ventilation stations require smoke protection dampers in **supply air lines** and also in **exhaust air lines**. These smoke protection dampers must also close if the fans stop working.



Smoke protection damper

Ventilation ducts

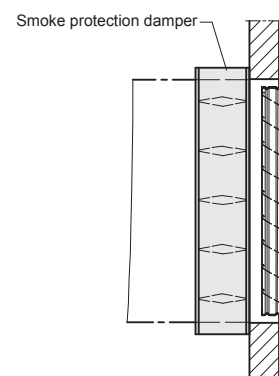
Only ventilation ducts made of non-combustible materials (DIN 4102-1) with a melting point > 1000°C are permitted to be connected to smoke protection dampers. Ventilation ducts which bridge floors or fire compartments must have a fire resistance period corresponding to the wall or ceiling to be protected.

Smoke detectors

Smoke protection dampers require smoke detectors. The release element should strictly be installed in the supply air line. All grouped smoke protection dampers can be controlled by this, including those in exhaust air lines.

Installation example:

Weather-resistant louvre in an exterior wall with smoke protection damper and ventilation duct connection on one side

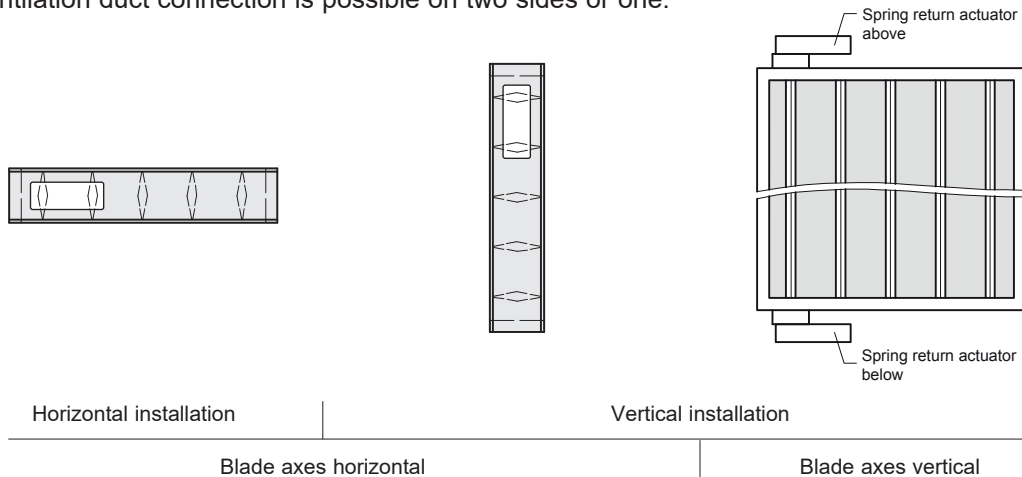


JR smoke protection dampers

Installation

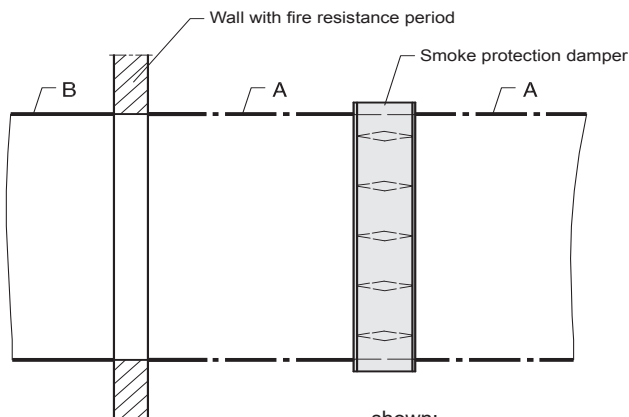
JR smoke protection dampers can be installed in the horizontal or vertical installation position in ventilation ducts, and directly on and remote from walls or ceilings.

Ventilation duct connection is possible on two sides or one.



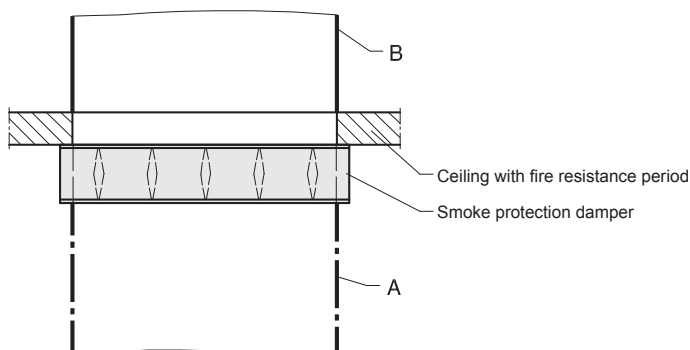
JR smoke protection dampers

- remote from walls or ceilings



shown:
vertical installation position remote from a wall

- installation directly to walls or ceilings



shown:
horizontal installation position directly below a ceiling

Ventilation ducts

A in ventilation stations if they exist.

Ventilation ducts*) made of non-combustible materials (DIN 4102-1) and with a melting point > 1000°C.

B outside ventilation stations

- ventilation duct with fire resistance period if fire compartments or floors have to be bridged.
- Ventilation duct without fire resistance period and without special requirements for areas immediately adjoining ventilation stations.

*) made of sheet steel, calcium silicate or ventilation ducts with fire resistance period, for example. Aluminium is unsuitable.

Electrical connection

⇒ see page 3

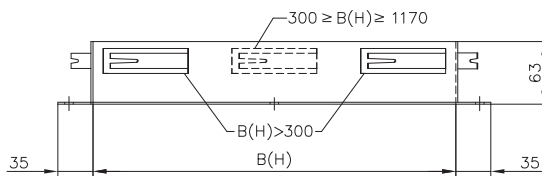
JR smoke protection dampers

Accessories, servicing, order data, specification text

Accessories

MR Wall installation frame made of galvanised sheet steel, pressed, bevelled and welded at the corners and with several wall anchors for cementing.

GF Counterflange made of galvanised sheet steel, pressed, bevelled and welded at the corners.



Counterflanges do not have wall anchors.

Servicing

The smoke protection dampers should be checked regularly, at least once a year, by an expert to ensure that they are properly functioning.

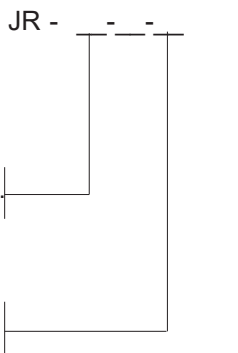
- All blades of the smoke protection dampers must close completely when the power supply is switched off or connected smoke detectors are released.
- Bearings should be cleaned and lubricated as required.
- Defects must be rectified immediately by servicing. Original spare parts must be used.

Size

Nominal dimension B x H x
 ⇒ see page 2

Spring return actuator

- M6 230 V AC
- M7 24 V AC/DC



Accessories

- MR with wall frame
- 1GF with 1 x counterflange
- 2GF with 2 x counterflanges
 ⇒ see pages 2 and 7

Order smoke detectors separately.

Smoke protection damper with General Building Inspectorate Approval. For installation in ventilation ducts and on or remote from walls and ceilings. U-shaped frame in 180-mm installation length and with connection flanges, profiled hollow body blades, external drive linkage and galvanised drive axles in brass bearing bushes. Electric spring return actuator for 24 V AC/DC or 230 V AC with limit switches for CLOSED and OPEN damper blade positions. With wall installation frame and counterflange/counterflanges.

.....	Pc	
Volume flow:	 m ³ /h
Size B x H	x..... mm
Manufacturer:		WILDEBOER®
Type:		JR
Approval number:		Z-78.4-40
complete with fixings	deliver:
	install:

Select texts not highlighted in bold as required!

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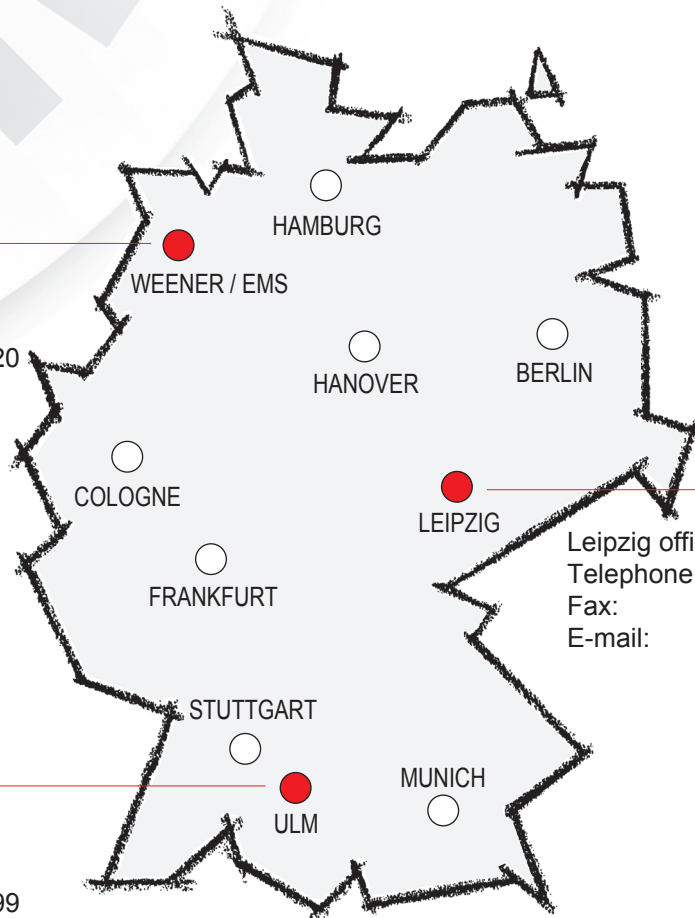
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