

Installation, Operation and Maintenance Instructions

Pressure-relief dampers DRK Back-draught dampers RSK



Highend
air handling
components



Product designation

DRK-IO..., RSKIO...

Technical specifications

Max. size W×H:

DRK: 2400mm×7900mm

RSK: 7900mm×7900mm (subject to shipping)
1200mm

Max. slat length:

1200mm

Tripping pressure:

DRK: acc. to order

RSK: no specified tripping pressure

Air flow direction:

horizontal or vertical acc. to customer order

Free cross section:

>60 % ((more precise figures after calculation
by manufacturer)

ATEX

DRK and RSK are only approved in specific designs and with appropriate identification for Zones I, 2I or 2, 22 according to ATEX Directive 2014/34/EU.

If the fitter or operator changes the dampers in any way, the ATEX approval becomes null and void. It is important to ensure that the damper and additional equipment are installed in compliance with zoning requirements.

Shipment

In principle, avoid all damage caused by external influences. Never lift dampers by the slats or the outer linkages. Dampers with a maximum weight of 50kg can be lifted by the C-profile frame. With heavier dampers, use at least four points at the corner angles as suspension points. Do not use individual slats under any circumstances as footholds during installation. Report any damage, e.g. deformation of slats, dents, impacts or warping of the C-profile frame etc. immediately to the supplier or manufacturer. This may impair the proper functioning of the damper and at best cause dangerous circumstances to occur.

ATEX: Under no circumstances may ATEX dampers be fitted after a fall or impact with visible or concealed damage.

Installation

These dampers can be fitted or removed to or from a wall or an air conditioning system, or integrated in a duct section. First make sure the air flow is in the proper direction as indicated by the red arrow on the damper housing. Mount the dampers warp-free, tension-free, on a flat surface and without any angular errors in the damper frame. When mounting, use the 4 corner holes provided as standard. With larger dampers, fit additional flange couplings at spacings of 200–500mm. This is the responsibility of the planning engineer or fitter. During installation, make sure that the slats are exactly horizontal. The damper must be adjusted exactly vertically (for horizontal air flow) or exactly horizontally (for vertical air flow).

When installation is complete, check the angle of the damper frame. It must be exactly 90°. Correct any deviations

immediately. In addition check the free movement of the slats, linkage and tripping mechanism.

Avoid as far as possible any reduction in freedom of movement on customer premises when installing insulation materials, installation ducts, auxiliary structures etc. If this is not observed, it can lead to considerable disruptions in operation, e.g. slats rub against the damper frame, different tripping pressure, damper fails to open or close, reduced leak tightness, etc.

On models with side seals (Di, DIN, CEN etc.) protect the units from impurities of all kinds during the installation phase. Drilling swarf and concrete chips can damage the side seals. Before starting up the dampers, wipe the side seals thoroughly until they are dry.

Note:

- During installation and maintenance, it is recommended to wear cut-resistant gloves to reduce the risk of cuts on the sharp edges, which are unavoidable due to the manufacturing process.
- Always keep doors closed. Switching on the ventilation system with the doors open can cause injuries.

ATEX: All relevant national and international standards and regulations for Ex zones must be observed. On dampers with ATEX functionality in particular, the damper housing must be earthed using the earthing braids attached by the manufacturer. No mechanical changes may be made to the product. In addition do not attach any components (motors, limit switches, etc.) to the damper if they have not been analyzed for ignition risk by the appropriate manufacturers or approved for ATEX zones. It is prohibited

Installation, Operation and Maintenance Instructions

Pressure-relief dampers DRK Back-draught dampers RSK

to drill holes or fit bolts or screws in the interior of the dampers. This could lead to damage or disturb damper operation. If there is a risk at the factory that foreign bodies may enter the movement area of the slats, prevent them by suitable means (filters or catchment grills). This prevents the slats from sticking and the possibility of frictional heat developing.

Fitting motors

DRK and RSK basically function without a motor. However, for special applications, a motor may be fitted using a special bracket. When fitting motors, always comply with the maintenance and fitting instructions of the motor manufacturer. With lift motors, pay special attention to power transmission at right angles to ensure trouble-free operation of the damper. Especially with drive motors which have high closing speeds, pay special attention to adequate protection of the movement areas (slats and linkages) to prevent reaching into the mechanisms. Responsibility lies with the operator.

Note: Electrical installations may only be made by qualified personnel.

ATEX: All relevant national and international standards and regulations for Ex zones must be observed. In particular, only drive motors, limit switches etc. with special approval for use in ATEX zones are allowed. Responsibility lies with the operator.

Adjusting tripping pressure

RSK: Back-draught dampers have no specified opening pressure.

DRK: The tripping pressure is adjusted according to customer specifications on a test stand at the manufacturer's factory. After installation, the tripping pressure may be readjusted within a limited range as required. This occurs by sliding the tripping weight on the lever and refixing it in the required position. If the weights are arranged above a passageway, it is imperative to install a suitable catchment device.

Maintenance

Depending on the degree of soiling of the medium, carry out a dry clean from time to time; the seals in particular must be cleaned at regular intervals. In addition, operate the dampers at regular intervals to test for their operability depending on the specific plant conditions. This prevents the adjacent slats from sticking. The slide bearings can be

blown off using compressed air as required, although they are basically maintenance-free (lubrication). Otherwise the DRK models operate maintenance-free.

Only LUCOMA genuine spare parts may be used for all repair and maintenance work.

Note: When working on and around the dampers, be sure not to reach into the area of the dampers. The dampers must be de-energised or, in the case of pneumatic actuators, depressurised.

ATEX: All relevant national and international standards and regulations for Ex zones must be observed.

Special instructions

Before using LUCOMA dampers in areas with increased requirements, report the prevailing conditions to the manufacturer so that the correct damper materials can be selected. The correct damper materials are especially important in factories with chemically laden atmospheres, electroplating shops, battery rooms etc.

Warranty

When installed and operated properly, the warranty according to the Swiss Code of Obligations is 2 years.

ATEX: Dampers operated in ATEX zones should be replaced every 10 years for safety reasons.