

Installation, Operation and Maintenance Instructions

RGK Reglair Precision control dampers



Product designation

RGK-IO..., RGK-15..., RGK-17..., RGK-30..., RGK-50..., RGK-51...

Technical specifications

Max. size W×H:	7900mm×7900mm (subject to shipping)
Max. slat length:	100mm slat max. 2000mm, 150mm slat max. 2500mm
Max. air velocity:	20 metres per second
Closing torque:	$M \text{ (Nm)} = (0.23 \times Q) + (B(m) \times Q)$
Closing torque with MS:	$M \text{ (Nm)} = (0.46 \times Q) + (B(m) \times Q)$ M = closing torque in Nm, B = damper width, Q = number of slats
Closing direction:	clockwise as standard
Air flow direction:	freely selectable
Free cross section:	> 60% (more precise figures after calculation by manufacturer)

ATEX

RGK dampers 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 50 kg 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

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. 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 gear wheels. 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 dis-

ruptions in operation, e.g. slats rub against the damper frame, increased damper torque, damper fails to open or close, reduced leak tightness, fatigue fractures on the axles etc.

Only dampers which are equipped with collar bushings can be fitted with vertical slats (also called standing slats). In addition, make sure with this damper application that additional bolts or reinforcements are affixed with dampers larger than 1000×1000mm. The lower frame profile on which the entire slat weight rests must also be supported by the customer. Sagging can lead to damper damage and plant outages.

On models with side seals (Di, DIN, CEN, S 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

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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 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.

Installation, motors and electronic accessories

Motors and electronic accessories must be fitted in compliance with the relevant regulations of the appropriate manufacturers.

Install the motors according to the relevant regulations of the appropriate manufacturers. Comply with the maintenance and installation instructions of the corresponding manufacturers.

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.

RGK models close clockwise as standard.

Only use electrical accessories such as monitoring sensors, limit switches etc. in the areas specified by the manufacturer and under specified conditions with our products. This type of component may only be installed on separate brackets designed for this. It is prohibited to drill holes or fit bolts or screws in the damper frames.

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, sensors etc. with special approval for use in ATEX zones are allowed. Responsibility lies with the operator.

Dampers with electric heating

The standard version of the control damper with electric heating is designed for temperatures down to -20 °C; special versions are available for temperatures down to -60 °C. When installing, make sure no mechanical damage is

made to the heating strip. Do not change the cable routing to the damper and do not manipulate the cable brackets. Any change or damage may lead to partial interruptions in heating or the total failure of the heating strip. Damaged cables must be replaced by the manufacturer. The operator is responsible for wiring, controlling and monitoring the heating strip and this may only be carried out by qualified staff. The trace heating must switch off at +3 °C at the latest so that any condensate can dry off before the outside temperature drops any further. Do not expose the dampers to the weather when operated under -20 °C. In this case, the sides of the dampers must be covered to protect the damper axles from the effects of the weather.

In addition, a weather-proof louvre with additional trace heating can be installed on the weather side. Observe the instructions of the appropriate manufacturer for wiring and fusing the heating strip.

ATEX: All relevant national and international standards and regulations for Ex zones must be observed. Responsibility lies with the operator. Due to the stricter safety requirements in ATEX zones, the operator must inspect the function of the heating cable once a year. Here we recommend temperature measurements directly on the heating strip using a tested measuring instrument.

The specifications below are for verifying the heating capacity of the heating strip:

Ambient temperature	Cable temperature
15 °C bis 1 °C	> 30 °C
0 °C bis -20 °C	> 20 °C
-21 °C bis -50 °C	> 10 °C

Maintenance

Depending on the degree of soiling of the medium, carry out a dry clean from time to time. In addition operate the dampers at least four times a year according to the plant-specific conditions. This prevents the slat seals from sticking in closed state. The slide bearings can be blown off using compressed air as required, although they are basically maintenance-free (lubrication). Otherwise the RGK 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.

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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.