

SHUT-OFF DAMPER
TYPE AK-EX



ATEX-ZERTIFIZIERUNG



ATEX-COMPLIANT PARTS
AND UNITS

AK-EX

FOR LOW-LEAKAGE SHUT-OFF OF VOLUME FLOWS IN POTENTIALLY EXPLOSIVE ATMOSPHERES (ATEX)

Circular shut-off dampers for shutting off ducts, approved and certified for potentially explosive atmospheres (ATEX)

- ATEX-compliant construction and parts
- Approved for all gases, mists and vapours in zones 1 and 2, with electric actuator additionally for dusts in zones 21 and 22
- Suitable for supply air and extract air
- Electric or pneumatic actuator
- Any installation orientation
- Closed blade air leakage to EN 1751, up to class 4
- Casing air leakage to EN 1751, class C

Optional equipment and accessories

- Spring return actuator
- Auxiliary switch with adjustable switching points for capturing the end positions

General information



Application

- Circular EXCONTROL shut-off dampers Type AK-Ex for shutting off or restricting the airflow in ventilation ducts of air conditioning systems
- For use in potentially explosive atmospheres (ATEX)
- Input signal to control shut-off damper blade is to be provided by others

Special features

- ATEX mark and certification
- ATEX equipment group II, approved for use in zones 1 and 2; electric actuator also for zones 21 and 22

Nominal sizes

- 125, 160, 200, 250, 315, 400

Construction

- Galvanised sheet steel
- P1: Inner duct powder-coated, silver grey (RAL 7001)
- A2: Inner duct in stainless steel

Parts and characteristics

- Ready-to-install shut-off damper
- Damper blade with blade mechanism
- Connection for equipotential bonding
- Cable bushings suitable for use in potentially explosive atmospheres
- ATEX-compliant actuator is factory assembled and wired

Attachments

- Electronic actuator:
- Auxiliary switch for capturing the end positions
- Pneumatic actuator

Construction features

- Circular casing
- Construction and materials comply with the EU directive for use in potentially explosive atmospheres (ATEX)
- Spigot with lip seal, for circular connecting ducts to EN 1506 or EN 13180

Technical data

- Nominal sizes: 125 – 400 mm
- Acceptable static differential pressure: 1500 Pa

Standards and guidelines

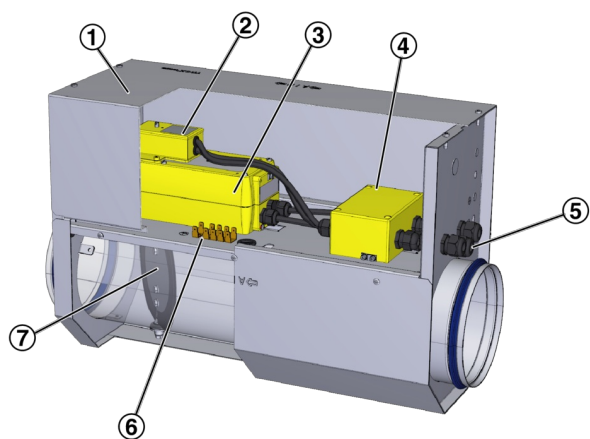
- Directive 94/9/EC: Equipment and protective systems intended for use in potentially explosive atmospheres
- Closed blade air leakage to EN 1751, class 4 (nominal sizes 100 and 160, class 3)
- Nominal sizes 125 and 160 meet the general requirements, nominal sizes 200 – 400 meet the increased requirements of DIN 1946, part 4, with regard to the acceptable closed blade air leakage
- Casing air leakage to EN 1751, class C

Maintenance

- Maintenance-free as construction and materials are not subject to wear

TECHNICAL INFORMATION

Schematic illustration of the AK-Ex with electronic control



- ① Cover
- ② Auxiliary switch
- ③ Electric actuator
- ④ Terminal box
- ⑤ Cable bushing
- ⑥ Equipotential bonding
- ⑦ Damper blade

| | |
|--|--------------|
| Nominal sizes | 125 – 400 mm |
| Acceptable static differential pressure | 1500 Pa |
| Operating temperature | 10 – 50 °C |

Electronic

| | |
|-----------------------------|--|
| Supply voltage | 24 – 230 V AC \pm 10 %, 50/60 Hz |
| Power rating | 120 VA max. |
| IEC protection class | I (protective earth) |
| Protection level | IP 42 |
| EC conformity | ATEX to 2014/34/EU, EMC to 2014/30/EU, low voltage to 2014/35/EU |

Pneumatic

| | |
|---------------------------------------|--|
| Control pressure | 0 – 1.2 bar |
| Maximum pressure | 1.5 bar |
| Compressed air | Compressed air for instruments, free of oil, water and dust |
| Protection level | IP 42 |
| Air consumption (100 % stroke) | 0.3 l/n (nominal sizes 125 – 250) to 0.5 l/n max. (nominal size 315 – 400) |
| EC conformity | ATEX to 2014/34/EU |

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

Circular shut-off dampers for shutting off or restricting the airflow in potentially explosive atmospheres, for supply air or extract air, available in 6 nominal sizes.

Suitable for duct pressures up to 1500 Pa.

Ready-to-install unit consists of the casing with damper blade, and parts for equipotential bonding and for use in potentially explosive atmospheres.

Spigot with lip seal, for circular connecting ducts to EN 1506 or EN 13180.

Closed blade air leakage to EN 1751, class 4 (nominal sizes 125 and 160, class 3).

Casing air leakage to EN 1751, class C.

Special features

- ATEX mark and certification
- ATEX equipment group II, approved for use in zones 1 and 2; electric actuator also for zones 21 and 22

Materials and surfaces

- Casing and damper blade made of galvanised sheet steel
- Blade seal made of TPE plastic
- Plain bearings made of polyurethane
- Electric actuator made of die cast aluminium
- Pneumatic actuator made of plastic
- Inner tube either made of stainless steel 1.4301 (A2) or powder-coated (P1)

Construction

- Galvanised sheet steel
- P1: Inner duct powder-coated, silver grey (RAL 7001)
- A2: Inner duct in stainless steel

Technical data

- Nominal sizes: 125 – 400 mm
- Acceptable static differential pressure: 1500 Pa

Sizing data

- q_v [m³ /h]

Air-regenerated noise

- LPA [dB(A)]

1 Type

AK-Ex Shut-off damper for potentially explosive atmospheres

2 Material

No entry: galvanised sheet steel

P1 Inner duct powder-coated, RAL 7001 (silver grey)

A2 Inner duct in stainless steel

3 Nominal size [mm]

125, 160, 200, 250, 315, 400

4 Actuator

Electric

T0S Actuator

T0F Spring return actuator

T0X Actuator with auxiliary switch

T0Y Spring return actuator with auxiliary switch

Pneumatic

P50 Actuator

5 Damper blade position

Only with spring return actuator or pneumatic actuator

NO pressure off/power off to OPEN (Normally Open)

NC power off/pressure off to CLOSE (Normally Closed)

AK-Ex - P1 / 125 / T0F / NO

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|---|---|---|---|---|
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| 1 | 2 | 3 | 4 | 5 |