



Additional operating instructions according to ATEX 2014/34/EU

Damper DKEX



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Additional operating instructions according to ATEX 2014/34/EU damper DKEX

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General conditions

General description and instructions



These additional operating instructions must be observed prior to mounting and commissioning the device.

These additional operating instructions contain basic information regarding its use in areas subject to explosion hazards to be observed during assembly, operation and maintenance.

Prior to mounting and commissioning and during maintenance work, the present additional operating instructions must be read by the installer and the responsible skilled personnel/system operator!

The non-observance of the proper assembly and safety instructions will result in the loss of any claims for damages!

Personnel qualification and training

The personnel for assembly, inspection and maintenance must have the relevant qualification for this work.

The area of responsibility, competence and monitoring of the personnel must be exactly regulated by the system operator. If the personnel does not have the required knowledge, it must be trained and instructed. Moreover, the system operator must ensure that the contents of the additional operating instructions are understood completely by the personnel.

Safety-conscious work

The safety instructions given in these additional operating instructions, the existing national and international regulations on explosion protection, accident prevention and the system operator's internal work, operating and safety regulations must be observed.

Designated use

The product has the following test number and ATEX marking:

 II 2G Ex h IIC T6 Gb EPS 09 ATEX 2 155 X
II 2D Ex h IIIC T80°C Db

The dampers have been designed for use in areas subject to explosion hazards according to ATEX of device group II, device category 2 for Zones 1 and 21, as well as device category 3 for Zones 2 and 22.

These devices are ONLY suitable for use in approved Ex zones. The operating safety of the devices is only guaranteed when used in accordance with their designated use.

The operating safety of the delivered devices is only guaranteed when used in accordance with their designated use. The damper shall only be used for media that do not exceed a temperature of 80°C. If used in hot-air heating systems with a media temperature of up to 95°C, the temperature class is downgraded to T5.

Note:

In explosion-protected zones, only devices that have an ATEX approval for this use may be used. It rests with the operator to ensure that the products are only used in zones specified by the product marking.

Delivery and storage

Upon receipt, the devices must be checked for completeness and transport damage. If delivered incompletely or damaged, the forwarding company and the SCHAKO KG have to be informed immediately.

The device must not be exposed directly to weather, solar radiation and moisture.

Mounting information

Mounting and commissioning must be carried out by skilled personnel only and in accordance with the recognised technical rules and the safety and accident prevention regulations. In order to avoid the risk of static charges, the damper must be connected to the on-site equipotential bonding on the grounding connection provided for this purpose.

Maintenance

Only a device subjected to proper maintenance and kept in perfect condition can guarantee safe and reliable operation.

When defective parts are replaced with spare parts, only SCHAKO original spare parts may be used. The SCHAKO KG cannot be held liable for any damage caused by using spare parts that are not original and will not give any warranty.

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Hazard caused by non-observance of the safety instructions

Non-observance of the safety instructions can result both in putting persons and the environment and operating units at risk. Likewise, non-observance of the safety instructions will result in the loss of any claims for damages.

Special conditions

It must be ensured that all metal components are properly and permanently connected to the ground potential. The system operator has to make sure that no metallic foreign objects can be found in the ventilation duct.

The attached and installed electrical devices must have a suitable explosion-proof design.

Type of ignition protection

The type of ignition protection of the damper is guaranteed by its safe design.

Quality assurance

The SCHAKO production facilities are certified according to the QM procedure EN ISO 9001.

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Description

The round, manually adjustable damper DKEX is suitable for installation in round supply air and return air ducts according to DIN EN 1506. It is used for regulating the volumetric flows in air-conditioning installations.

The hand-adjustable device with integrated position indicator allows an exact setting of the damper blade, without tools, between 0° and 90°. The housing is dimensionally stable due to standard double beads.

The damper type DKEX can be used at temperatures between 0 °C and +50 °C.

Maximum duct pressure 1000 Pa.

For maintenance, service, retrofitting, etc., inspection openings in sufficient number and size must be provided on-site.

Housing leakage according to DIN EN 1751, class C (NW80 class B), at a duct pressure of up to 1000 Pa.

Leakage at closed damper blade according to DIN EN 1751, class 4 (NW80 to NW140 class 3), at a duct pressure of up to 1000 Pa.

Advantages:

- Stable design
- Easy to regulate
- Easy to install
- Position-independent installation

Models and dimensions

Construction

Housing, control damper and hand-adjustable device

- Galvanised sheet steel (-SV)
- Stainless steel, V2A, 1.4301 (-V2)

Axle bolt

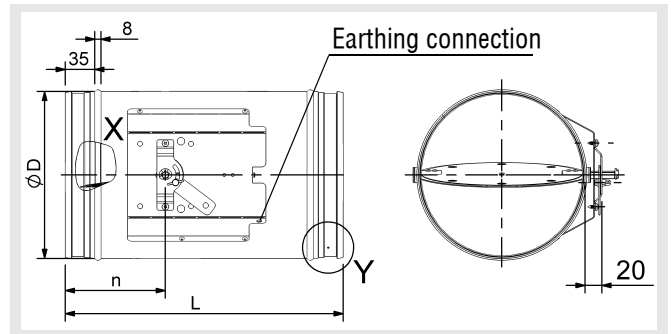
- Brass

Model

DKEX-N - round damper, not airtight

DKEX-L - round damper with silicone-free damper blade seal made of PUR (NW 80-400 airtight according to DIN EN 1751)

Dimensions



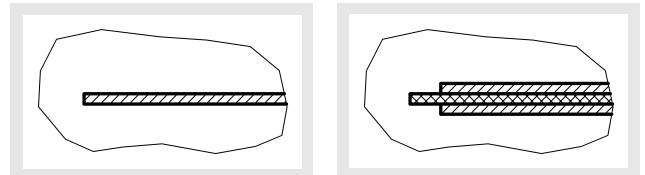
Damper blade

Detail X

DKEX-N

DKEX-L

(sealing airtight according to DIN EN 1751)



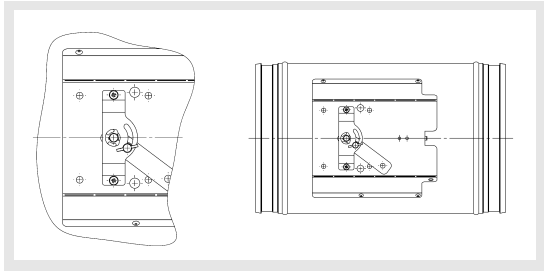
Available sizes

NW	øD	L	n
80	78	290	89
100	98		89
125	123		89
140	138		89
160	158		99
180	178	330	109
200	198		119
250	248		144
280	278	500	159
315	313		176,5
355	353		196,5
400	398		219

Additional operating instructions according to ATEX 2014/34/EU damper DKEX

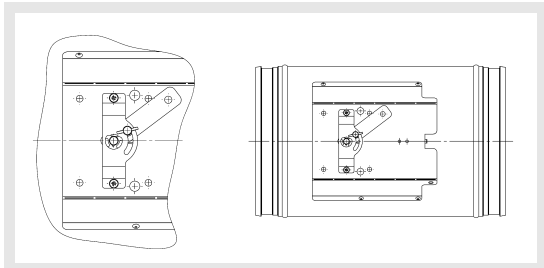
Hand-adjustable device left

Damper blade position "OPEN"



Hand-adjustable device right

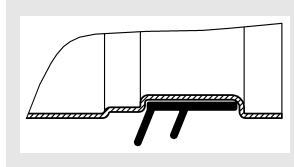
Damper blade position "CLOSED"



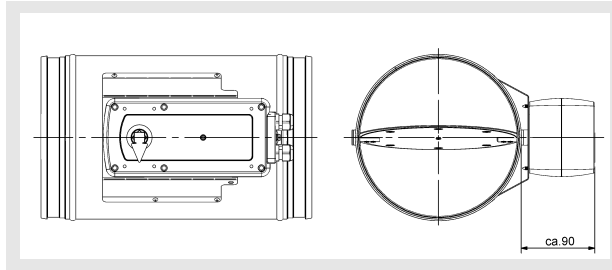
Dimensions of accessories

Rubber lip seal (-GD1)

Detail Y



Electric actuator / spring return actuator



Attention: If the motor is fitted on site, specify the exact motor type!

Accessories

Rubber lip seal (-GD1)

- special rubber, both sides

Electric actuator / spring return actuator

The description of the fields of application and the technical data for the actuator SCHISCHEK ExMax-...-S / -Y / -F / -SF / -YF can be found in the SCHISCHEK documentation at www.schischek.de

without spring return

- ExMax 5.10 (3-point activation)
- ExMax 5.10 - S (3-point activation, with one limit switch)
- ExMax 5.10 - Y (3-point activation and continuous control)

with spring return

- ExMax 5.10 - F (3-point activation)
- ExMax 5.10 - SF (3-point activation, with one limit switch)
- ExMax 5.10 - YF (3-point activation and continuous control)

Leakage classes according to DIN EN 1751

NW	Housing leakage	Damper blade leakage
80	B	3
100	C	3
125	C	3
140	C	4
160	C	4
180	C	4
200	C	4
250	C	4
280	C	4
315	C	4
355	C	4
400	C	4

Additional operating instructions according to ATEX 2014/34/EU damper DKEX

Use and electrical connection of actuators in areas subject to explosion hazards

Only ATEX-approved electrical equipment according to ATEX Directive 2014/34/EU for device group II as well as device category 2 for zones 1 and 21 and device category 3 for zone 2 and 22, such as actuators, terminal boxes and thermocouples as specified by SCHAKO may be used for devices from SCHAKO KG.

For the technical data and connection diagrams, please refer to the technical documentation.

The connection lines must be installed for permanent use and in such a way that they are sufficiently protected from mechanical and thermal damage.

Devices with explosion-protected drives and terminal boxes have to be attached over the external potential connecting terminal to the potential equalisation provided by the customer with at least 4 mm² cooper solid-core.

The electrical connection lines of the actuators must be connected in a terminal box according to ATEX Directive 2014/34/EU for device group II as well as device category 2 for zones 1 and 21 and device category 3 for zones 2 and 22 if the electrical connection is made in the area subject to explosion hazards.

The dimensioning of the conductor cross-sections must be observed.

The actuators are maintenance-free with respect to their function, but the relevant maintenance regulations according to ATEX directives or factory regulations must be observed.

Information regarding maintenance and inspection

Proper maintenance increases operational safety and the service life of the device. This is why the devices should be subjected to regular inspection.

If inspection dates are prescribed by law, they must be complied with.

The operating personnel must be informed, prior to starting maintenance and inspection work.

The personal safety measures must be looked up in the safety data sheet. Hazard caused by contact or inhaling hazardous substances must be excluded by taking appropriate safety measures.

Prior to maintenance or inspection, all system components up- and downstream of the device must be switched off and secured against being switched on again.

Information regarding assembly and commissioning

Prior to being installed in the ventilation system, the damper must be checked for damage. Damaged fire dampers must not be installed.

The device may only be used in accordance with its designated use in air ventilation systems for supply air and return air.

The device must be mounted only using approved fastening material.

No additional parts must be fastened to the damper.

The damper must be connected to the ventilation duct network on both sides in electrically conducting manner.

In order to avoid the risk of static charges, the damper must be connected to the on-site equipotential bonding on the grounding connection provided for this purpose.

Make sure that the ventilation systems are not subjected to any anomalous operating conditions, such as vibrations, pressure surges or high proportions of solids in the medium.

For electrical connection diagrams, refer to the respective Schako additional information.

Electrical wiring and commissioning work must be performed by skilled personnel only.

The following inspection criteria must be observed:

- Visual inspection of the device
- Check the fastening of the device
- Check the electrical connections
- Check the grounding connection for tight fit and good contact
- Functional check
- For additional inspections, please refer to the technical documentation or additional maintenance instructions



Drosselklappe DKEX

Baugröße

Baujahr

Auftragsnummer

Positionsnummer

Seriennummer



II 2G Ex h IIC T6 Gb

II 2D Ex h IIIC T80°C Db

EPS 09 ATEX 2 155X



Additional operating instructions according to ATEX 2014/34/EU damper DKEX

Order code

01	02	03	04	05	06	07
Type	Model	Nominal width	Material	Duct connection	Actuator	Damper position
Example						
DKEX	-L	-200	-SV	-KA0	-E000	-NA

Example

DKEX-L-200-SV-KA0-E000-NA

Damper type DKEX, round design | sealing airtight | NW 200 mm | galvanised sheet steel | without rubber lip seal | with manual adjustment made of stainless steel V2A | without spring return actuator

Order details

01 - Type

DKEX = Damper DKEX, round design

02 - Model

N = not airtight (standard)

L = sealing airtight

03 - Nominal width

080 = NW 80 mm

100 = NW 100 mm

125 = NW 125 mm

140 = NW 140 mm

160 = NW 160 mm

180 = NW 180 mm

200 = NW 200 mm

250 = NW 250 mm

315 = NW 315 mm

355 = NW 355 mm

400 = NW 400 mm

04 - Material

SV = Galvanised sheet steel (standard)

V2 = Stainless steel, V2A, 1.4301

05 - Duct connection

KA0 = without rubber lip seal (standard)

GD1 = With rubber lip seal

06 - Actuator

without actuator

E000 = with manual adjustment made of stainless steel V2A (standard)

without spring return

E120 = ATEX-AZ-K2, 2/3-point, OPEN/CLOSED

E122 = ATEX-AZ-ES-K2, 2/3-point, OPEN/CLOSED with 2 integrated limit switches

E124 = ATEX-S-K2, 0-10V, 4-20 mA, continuous

with spring return

E126 = ATEX-EF-K2, 2/3-point, OPEN/CLOSED

E128 = ATEX-EF-ES-K2, 2/3-point, OPEN/CLOSED with 2 integrated limit switches

E130 = ATEX-SF-K2, 0-10V, 4-20 mA, continuous

07 - Damper position

NA = no spring return actuator (standard)

NO = currentless OPEN - normally open

NC = currentless CLOSED - normally closed (only for drives with spring return)

Please note!

Tension rings, counter flanges and duct silencers must be ordered separately and are supplied loose!


Additional operating instructions according to ATEX 2014/34/EU damper DKEX Certificate of conformity



(1) Konformitätsbescheinigung

- (2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen –
Richtlinie 2014/34/EU
- (3) Bescheinigungsnummer
EPS 09 ATEX 2 155 X **Revision 3**
- (4) Gerät: Drosselklappen DKA, DKB, DKA-L, DKEX
- (5) Hersteller: Schako KG
- (6) Anschrift: Steigstraße 25-27
78600 Kolbingen
Deutschland
- (7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Konformitätsbescheinigung festgelegt.
- (8) Bureau Veritas Consumer Products Services Germany GmbH bescheinigt aufgrund einer freiwilligen Prüfung auf Basis der Richtlinie 2014/34/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014 die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie. Die Ergebnisse der Prüfung sind in der vertraulichen Dokumentation unter der Referenznummer 09TH0026 festgelegt.
- (9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:
EN ISO 80079-36:2016 **EN ISO 80079-37:2017**
- (10) Falls das Zeichen „X“ hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.
- (11) Diese Konformitätsbescheinigung bezieht sich nur auf Konzeption und Prüfung des festgelegten Gerätes gemäß Richtlinie 2014/34/EU. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes. Diese Anforderungen werden nicht durch diese Bescheinigung abgedeckt.
- (12) Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:

 II 2G Ex h IIC T6 Gb

 II 2D Ex h IIIC T80°C Db



Hamburg, 15.05.2020

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Bescheinigungen ohne Unterschrift und Siegel haben keine Gültigkeit. Diese Bescheinigung darf nur unverändert weiterverbreitet werden. Auszüge oder Änderungen bedürfen der Genehmigung von Bureau Veritas Consumer Products Services Germany GmbH. EPS 09 ATEX 2 155 X, Revision 3.

Additional operating instructions according to ATEX 2014/34/EU damper DKEX



(13)

Anlage

(14) **Konformitätsbescheinigung EPS 09 ATEX 2 155 X**

Revision 3

(15) Beschreibung des Gerätes:

Die Drosselklappen dienen zur Verringerung oder Absperrung des Luftstromes in einer Lüftungsanlage.

(16) Referenznummer: 09TH0026

(17) Besondere Bedingungen:

Es muss sichergestellt werden, dass alle metallischen Teile ordnungsgemäß und dauerhaft mit dem Erdpotential verbunden sind.

Die an und eingebauten elektrischen Geräte müssen in geeigneter Weise explosionsgeschützt ausgeführt sein.

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen:

Durch Übereinstimmung mit Normen abgedeckt.



Zertifizierungsstelle Explosionsschutz

H. Schaffer

Hamburg, 15.05.2020

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