

Additional operating instructions according to ATEX 2014/34/EU Multi-Leaf Dampers HKU / JK-LU



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Additional operating instructions according to ATEX 2014/34/EU Multi-Leaf Dampers HKU JK-LU

Contents

General conditions	3
General description and instructions	3
Personnel qualification and training	3
Safety-conscious work	3
Designated use	3
Delivery and storage	3
Mounting information	3
Maintenance	3
Hazard caused by non-observance of the safety instructions	3
Description	4
Dimensions	5
Dimensions	5
Information regarding assembly and commissioning	6
Information regarding maintenance and inspection	6
Use and electrical connection of actuators in areas subject to explosion hazards	6
Certificate of conformity	7

Additional operating instructions according to ATEX 2014/34/EU Multi-Leaf Dampers HKU JK-LU

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!

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 devices have been designed for use in ventilation systems in areas subject to explosion hazards according to ATEX of Category II, Zones 1, 21 and Category III, Zones 2, 22.

These devices are not suitable for use in unreleased Ex zones.

The operating safety of the delivered devices is only guaranteed when used in accordance with their designated use.

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, electrical connection work 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.

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.

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.

Additional operating instructions according to ATEX 2014/34/EU Multi-Leaf Dampers HKU JK-LU


Description

Multi-leaf damper types HKU and JK-LU can be used in air-conditioning and ventilation systems **as control, throttle or shut-off dampers to control pressure and volumetric flow.**

The **flow-favouring blades are adjusted together, rotating in opposite directions**, via external steel gear wheels. The external arrangement of the gears has the advantage that, in comparison with internally arranged gears exposed to the air flow, they do not become dirty that quickly. A cover plate protects the gear wheels from outside dirt and reduces the personal accident danger during assembly or maintenance.

The multi-leaf dampers type HKU are suitable for a maximum pressure of up to 1000 Pa. The multi-leaf dampers type JK-LU are suitable for pressures of up to 1000 Pa.

The multi-leaf dampers are marked as follows according to ATEX:

	II 2 G IIB T6	
	II 2 D T80°C	
	II 3 G IIB T6	EPS 09 ATEX 2 157 X
	II 3 D T80°C	

These multi-leaf dampers meet the regulations of the ATEX directives and can be used as control, throttle or shut-off dampers in ventilation systems in areas subject to explosion hazards.

The multi-leaf dampers have been certified for explosion protection group II for Zones 1, 2 & 21, 22.

Zones 1 and 2 represent the application range containing gases, while Zones 21 and 22 represent the application range containing dusts.

Classification by zone must be established by the system operator or planner in compliance with current standards.

Note:

In explosion-protected zones, only devices that have an ATEX approval for this use may be used.

Technical data, information

- the grounding terminals of the multi-leaf dampers must be connected to the potential bonding

Temperature resistance

HKU:	temperature-resistant to a max. of +120°C
JK-LU 180:	temperature-resistant to a max. of +80°C
Gear wheels:	temperature-resistant to a max. of +120°C

Electric actuators

Actuator product Schischek with ATEX approval

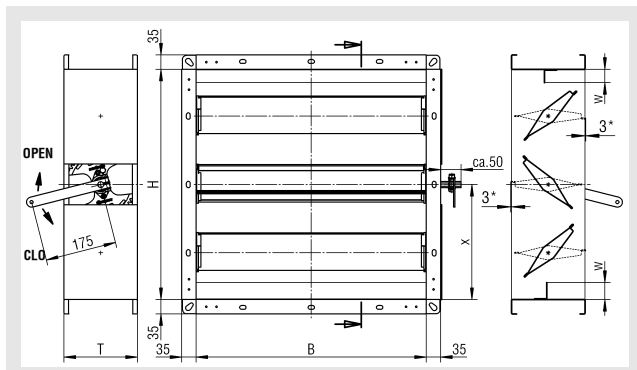
- Electric actuator, 24 VAC, 2-/3-point activation
- Electric actuator, 230 VAC, 2-/3-point activation
- Electric actuator, 24 VAC / 0-10 VDC
- Spring return actuator, 24 VAC, 2-/3-point activation
- Spring return actuator, 230 VAC, 2-/3-point activation

Additional operating instructions according to ATEX 2014/34/EU Multi-Leaf Dampers HKU JK-LU

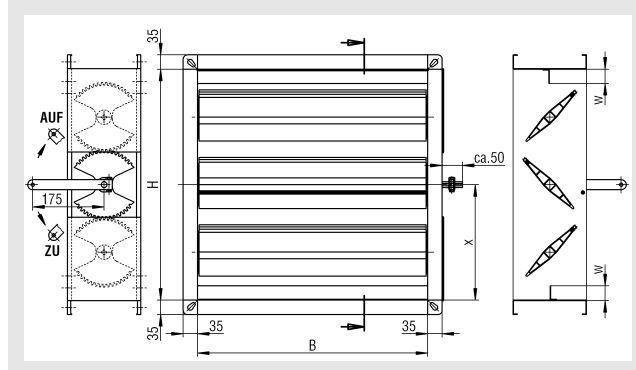
Dimensions

Dimensions

HKU



JK-LU



Available sizes HKU

W	H	Number of blades	w	x
201	201	1	21	96
225	225	1	34	108
252	252	1	46	121
318	318	1	80	154
357	357	2	16	257
400	400	2	37	279
449	449	2	62	303
503	503	2	87	313
565	565	3	36	278
634	634	3	70	312
711	711	4	25	434
797	797	4	68	477
894	894	5	33	442
1003	1003	5	86	497
1125	1125	6	64	641
1262	1262	7	49	626
1416	1416	8	42	619
1588	1588	9	44	789
1781	1781	10	57	802
1998	1998	11	82	994

All combined widths and heights available.

Available sizes JK-LU

W	H	Number of blades	w	x
201	201	1	18	100
225	225	1	30	113
252	252	1	45	126
318	357	2	15	262
357	400	2	35	284
400	449	2	60	308
449	503	3	10	251
503	565	3	35	283
565	634	3	70	317
634	711	4	25	439
711	797	4	65	315
797	894	5	30	447
894	1003	5	85	502
1003	1125	6	65	479
1125	1262	7	45	631
1262	1416	8	40	624
1416	1588	9	45	794
1588	1781	10	55	807
1781	1998	11	80	999
1998				

All combined widths and heights available.

Additional operating instructions according to ATEX 2014/34/EU Multi-Leaf Dampers HKU JK-LU

Information regarding assembly and commissioning

Prior to being installed in the ventilation system, the multi-leaf damper must be checked for damage. Damaged 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.

Use only approved fastening material for mounting.

No additional parts may be fastened to the multi-leaf damper.

The multi-leaf 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 multi-leaf 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.

If required, the electrical connection diagrams can be found in the respective Schako additional information.

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

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.

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

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

Only ATEX-approved electrical equipment according to ATEX Directive 94/9/EC for Zones 1, 2, 21, 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 copper solid-core.

The electrical connection lines of the actuators must be connected in a terminal box according ATEX Directive 94/9/EC for Zones 1, 2, 21, 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.

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

Additional operating instructions according to ATEX 2014/34/EU Multi-Leaf Dampers HKU JK-LU

Certificate of conformity



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Konformitätsbescheinigung

- (1) **Konformitätsbescheinigung**
- (2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen –
Richtlinie 2014/34/EU
- (3) Bescheinigungsnummer
EPS 09 ATEX 2 157 X Revision 1
- (4) Gerät: Jalousienklappen HKP/HKU, JK-LP, JK-LU
- (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 13463-1:2009
- (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 2 G IIC T6
II 2 D T80°C



Zertifizierungsstelle Explosionsschutz



Nürnberg, 07.02.2017

Seite 1 von 2

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 2 157 X, Revision 1.

Additional operating instructions according to ATEX 2014/34/EU Multi-Leaf Dampers HKU JK-LU



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(13)

Anlage

(14) **Konformitätsbescheinigung EPS 09 ATEX 2 157 X**

Revision 1

(15) Beschreibung des Gerätes:

Die Jalousienklappen werden eingesetzt um den Luftstrom in einer Lüftungsanlage zu verringern oder abzusperren.

(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

Nürnberg, 07.02.2017

D. Zitzmann

Seite 2 von 2

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