



Additional operating instructions according to ATEX 2014/34/EU

Ideal Comfort Diffuser IKA



Ferdinand Schad KG
Steigstraße 25-27
D-78600 Kolbingen
Telephone +49 (0) 74 63 - 980 - 0
Fax +49 (0) 74 63 - 980 - 200
info@schako.de
schako.com

Additional operating instructions according to ATEX 2014/34/EU for ideal comfort diffuser IKA

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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!

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 ideal comfort diffuser has the following ATEX marking:



II 2G Ex h IIC T6 Gb EPS 11 ATEX 2 306 X
II 2D Ex h IIIC T80°C Db

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

According to the ATEX marking, the diffuser may only be used for media with a maximum temperature of up to 80 °C.

Special conditions

It must be ensured that all metal components are properly and permanently connected to the ground potential.

The attached and installed electrical devices must have a suitable explosion-proof design. The combination of electrical and non-electrical devices must be examined again from a safety point of view.

To avoid propagating brush discharges on diffusers with RAL coating, it must be ensured that the air in the ventilation system is not heavily contaminated with non-conductive particles.

Type of ignition protection

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

Quality

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

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.

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Description

Electrically or manually adjustable diffusers are required **for cooling and heating large halls.**

In order to prevent draughts in the cooling mode, the supply air must largely be discharged horizontally from the diffuser. In heating mode, however, the diffuser must have high penetration depth, in order to achieve fast and efficient heating.

The diffuser type IKA with manual adjustment meets both these requirements. It ensures optimum air distribution in cooling and heating modes.

The diffuser has a funnel neck connection with an inner and outer basket arrangement. The diffuser has openings on its circumference and underside. In the heating mode, the diffuser can be adjusted manually or electrically by the actuator to close off the lateral openings and open the bottom openings, thus creating a vertical supply air jet. This results in a compact supply air jet, reaching a great penetration depth. **The high penetration depth ensures quick heating of the rooms.**

The outer casing is opened up for cooling thus closing the openings at the bottom of the diffuser. **The individual supply air jets created ensure a high induction, which means that velocity and temperature differentials are rapidly reduced.**

The openings on the perimeter and underside of the diffuser are dimensioned such that **pressure loss and noise level remain constant** if the air flow direction is changed.

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

This ideal comfort diffuser complies with the regulations of the ATEX directives and can be used in ventilation systems in areas subject to explosion hazards.

The ideal comfort diffuser has been certified for the explosion protection group II for Zones 1, 2 and 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

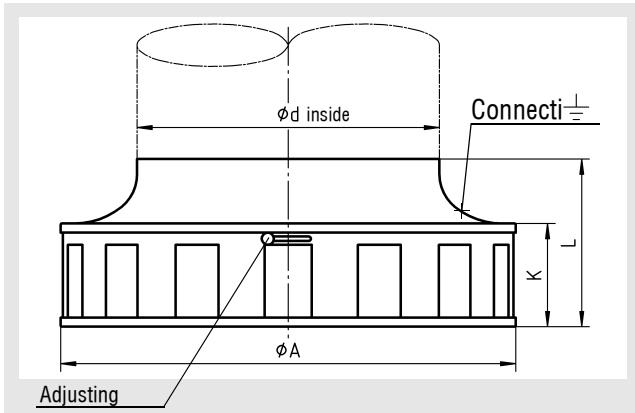
- The grounding terminals of the IKA must be connected to the equipotential bonding

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Models and dimensions

Dimensions

IKA



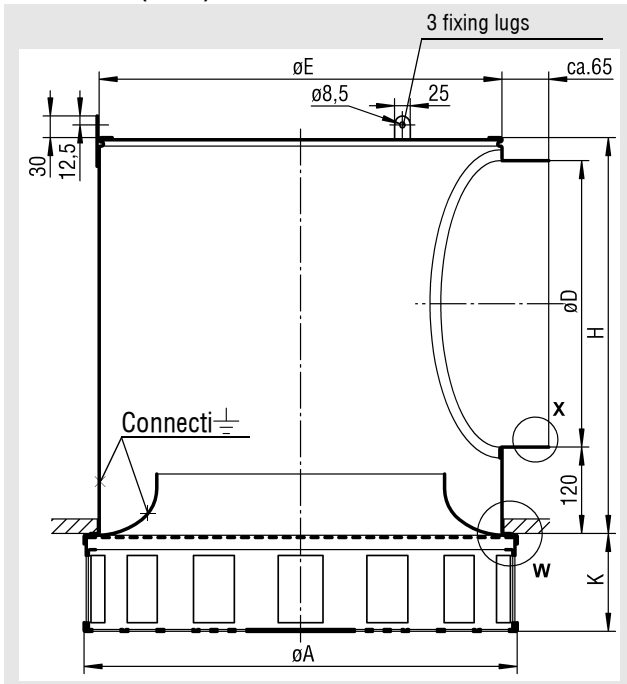
Available sizes

NW	ϕA	ϕd_{innen}	K	L
300	302	180	84	149
400	402	250	103	180
500	503	315	125	205
600	603	400	141	226
800	803	500	185	310

The inner diffuser basket is locked into position by means of an adjusting screw attached sideways. The diffuser is set to a horizontal throw ex factory. Subsequent adjustment is possible.

Dimensions of accessories

Plenum box (-AKR)



Available sizes

NW	ϕA	ϕE	K	ϕD	H
300	302	260	84	178	330
400	402	360	103	248	400
500	503	460	125	313	465
600	603	560	141	398	550
800	803	725	185	498	650

The galvanised sheet steel plenum box is attached to the diffuser IKA with 4 screws.

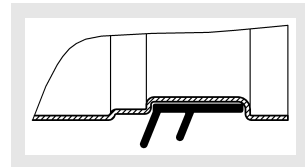
The throttle damper in the plenum box can easily be adjusted from below.

(Clockwise - damper CLOSED)

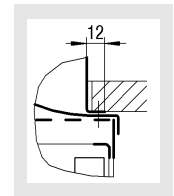
Rubber lip seal

(-GD1, at an extra charge)

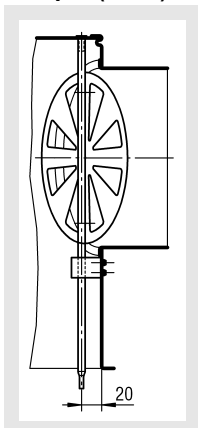
Detail X



Detail W



Damper (-DK1)

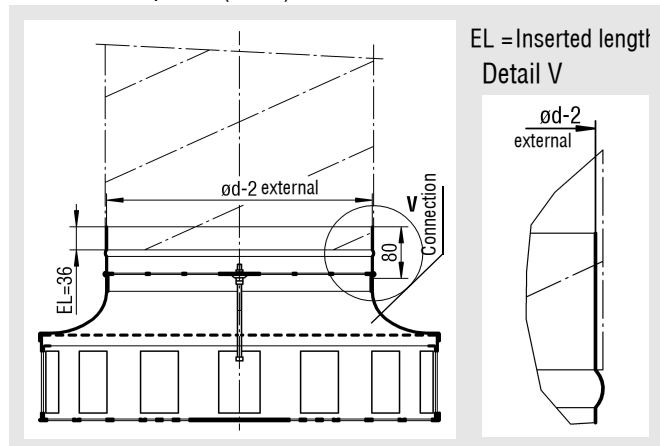


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IKA

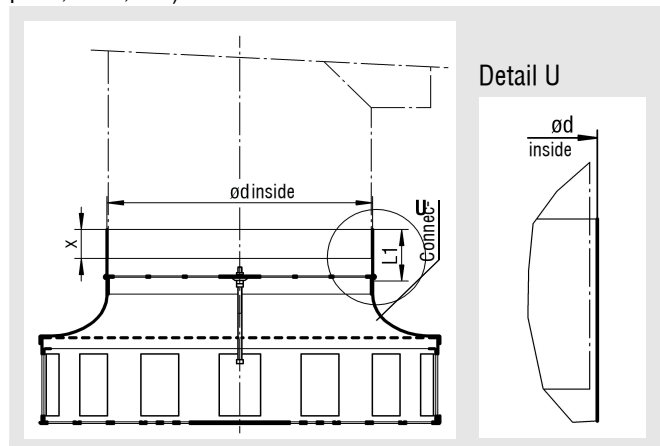
Damper (-DV1/-DV3)

Connection to spiral duct
 Without rubber lip seal (-DV1)
 With rubber lip seal (-DV3)



Damper (-DV2)

Connection to connection pieces according to DIN 24147 (e.g.: T-piece, bend, etc.)



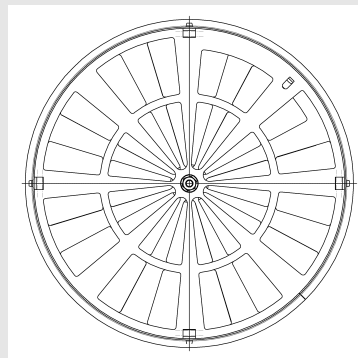
The adjustable damper is factory-fitted directly to the diffuser. The damper can be adjusted from below.
 (Counterclockwise - damper CLOSED)

Available sizes

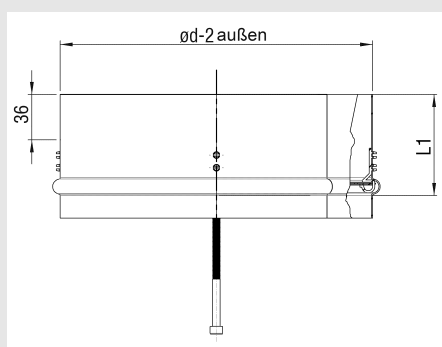
NW	ød	x	L	L1
300	180	40	144	80
400	250	60	175	100
500	315	60	200	100
600	400	80	221	120
800	500	80	310	120

Throttling element

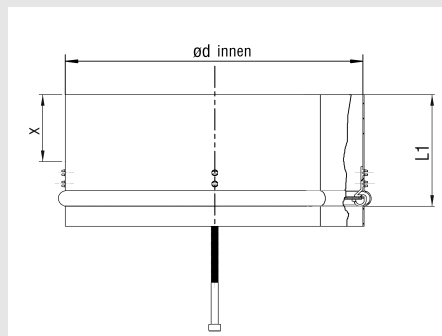
Top view



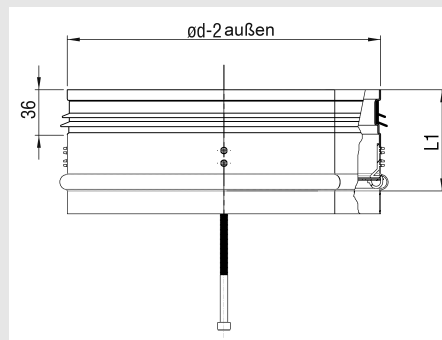
(-DV1)



(-DV2)



(-DV3)



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Information regarding assembly and commissioning

Prior to being installed in the ventilation system, the ideal comfort diffuser 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.

Use only approved fastening material for mounting.

No additional parts must be fastened to the particle filter box.

The ideal comfort diffuser must be connected to the ventilation duct network in electrically conducting manner.

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

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 maintenance and inspection criteria must be observed:

- The air diffusers must be cleaned as required or at the defined cleaning intervals. There must be no dust deposits on the air diffusers.
- Visual inspection of the device
- Check the fastening of the device
- 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



Attention:

Danger due to electrostatic charges.
Clean with moist cloth only.

**Additional operating instructions according to ATEX 2014/34/EU for ideal comfort diffuser
IKA
Type designation**

SCHAKO 

**Deckenimpulsauslässe Typ
IKA..**

Baugröße
Baujahr
Auftragsnummer
Positionsnummer
Seriennummer

 II 2G Ex h IIC T6 Gb
II 2D Ex h IIIC T80°C Db

 EPS 11 ATEX 2 306X

Additional operating instructions according to ATEX 2014/34/EU for ideal comfort diffuser IKA Certificate of conformity



(1) Konformitätsbescheinigung

(2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen –
Richtlinie 2014/34/EU

(3) Bescheinigungsnummer:

EPS 11 ATEX 2 306 X

Revision 2

(4) Gerät: Deckenimpulsauslässe Typ PIL
Ideal Komfort Auslass Typ IKA
Deckendrallauslass Typ DQJ
Deckenauslass Typ 4DF

(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 10TH0561 festgelegt.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:

EN ISO 80079-36:2016

EN ISO 80079-37:2016

(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 T8 Gb

 II 2D Ex h IIIC T80°C Db



Hamburg, 20.10.2020

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BUREAU
VERITAS



Anlage

(13)

(14) Konformitätsbescheinigung EPS 11 ATEX 2 306 X

Revision 2

(15) Beschreibung des Gerätes:

Die verschiedenen Luftauslässe dienen zur Luftstrahlführung in Räumen. Die Auslässe bestehen aus Stahlblech mit einer antistatischen Lackierung.

(16) Referenznummer: 10TH0561

(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. Die Zusammenführung von elektrischen und nichtelektrischen Geräten muss erneut sicherheitstechnisch betrachtet werden.

Zur Vermeidung von Gleitstielbüschelentladungen muss bei den Auslässen mit RAL Lack sichergestellt werden, dass die Luft im Lüftungssystem keine starke Belastung an nichtleitfähigen Partikeln aufweist.

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen:

Durch Übereinstimmung mit Normen abgedeckt.



Zertifizierungsstelle Explosionsschutz

H. Schaffler

Hamburg, 20.10.2020

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