



Swirl Diffuser With Integrated Light

DQJA-SR-Z-L / DQJA-SQ-Z-L



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Contents

Description	3
Construction	3
Accessories	3
Fastening	3
Models and dimensions	5
Dimensions	5
Dimensions of accessories	6
Fastening methods	6
Specification texts	7

Swirl Diffuser with Integrated Light DQJA-SR-Z-L / DQJA-SQ-Z-L

Description

Architects frequently demand a **combination of diffuser with an integrated light** to give the ceiling a better appearance. For this purpose, we designed our supply air diffuser type DQJA-SR-Z-L/SQ-Z-L with integrated light. This combination of ceiling diffuser and light is especially suitable for use **in comfort rooms requiring optimal air flows**, e.g. administrative buildings, conference rooms, schools, theatres and cinemas.

Diffuser model DQJA-SR-Z-L and DQJA-SQ-Z-L are available as **supply air diffuser**. The ceiling swirl diffuser consists of a faceplate with deflection blades and an integrated light. The blades can be adjusted either for a horizontal (air throw pattern "A") or vertical air flow. The free cross-section, pressure drop and noise level remain constant in all blade positions.

The ring cover, only available in conjunction with Staff lights, is white. The lights are delivered without lamps.

A volumetric flow meter can be integrated in the connection piece of the plenum box at an extra charge. The measurement error of the volumetric flow meter is $\pm 5\%$ at a connection pipe velocity of 2-5 m/s and a straight flow pattern of at least $1 \times D$. The measurement is carried out with mounted diffuser. By adjusting the throttle damper, the required air volume of each diffuser can be set quickly and correctly.

With the ROB model, the diffuser plate, the throttle damper and, if built in, the volumetric flow measuring device can be removed from the plenum boxes SAK/SRK to allow duct cleaning robots into the ductwork from the room side.

Construction

Faceplate

- Sheet steel painted to RAL 9010 (white)
- Sheet steel painted to a different RAL colour (at an extra charge)
- Brushed stainless steel, 1.4301 (V2A)

Blades

- Plastic, RAL colour 9010 (white) or RAL 9005 (black)
- Aluminium painted to the RAL colour of the faceplate (blades cannot be adjusted subsequently)

Light

- Made by Staff, 75W/50W (DL/E 100 QT 12)

Accessories

Plenum box

- Galvanised sheet steel

Throttle damper (-DK)

- Damper made of galvanised sheet steel
- Damper fastening made of plastic

Rubber lip seal (-GD)

- Special rubber

Ring cover

- Plastic, RAL 9010 (white)

ROB version (-ROB)

- Removable diffuser plate, throttle damper and volumetric flow meter

Volumetric flow meter (-VME)

- Mounting made of galvanised sheet steel
- Measuring sensor made of plastic
- Aluminium connections.

Internal insulation (-li)

- Thermal insulation inside the plenum box

External insulation (-la)

- Thermal insulation on the outside of the plenum box

Fastening

Screw mounting (-SM)

- 4 and, for NW 800, 8 raised countersunk head tapping screws (on-site)

Concealed mounting (-VM)

- not possible!

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Special model

For special perforations, the standard hole in the blade for adjusting throttle damper can also be placed in the faceplate.

For additional technical data, blade adjustment possibilities and special blade settings please refer to the documentation of swirl diffuser type DQJA-SR/SQ.

The installation of lights reduces the air throw of the swirl diffuser. This must be taken into consideration when making your selection. The percentage by which the air throw is reduced is calculated as follows:

$$\text{Supply air volume } V_{ZU \text{ (diagram value)}} = V_{ZU \text{ (with light)}} \times \text{KF}$$

Example:

Diffuser: DQJA-SR-Z-L 600

Reduction of the air throw by installation of a light:

10 % (see. value in KF table)

desired supply volume $V_{ZU \text{ (with light)}} = 500 \text{ m}^3/\text{h}$

Supply volume $V_{ZU \text{ (diagram value)}} = 500 \times 1.1 = 550 \text{ m}^3/\text{h}$

KF table: Reduction of the air throw in percent

NW	DQJA-SR-Z-L	DQJA-SQ-Z-L
400	32.3%	27.1%
500	15.1%	12.2%
600	10.0%	8.4%
625	10.0%	8.4%
800	6.0%	4.3%

NW = nominal size

Technical data of the lights used

Staff DL/E 100 QT 12 75W/50W

Attention!

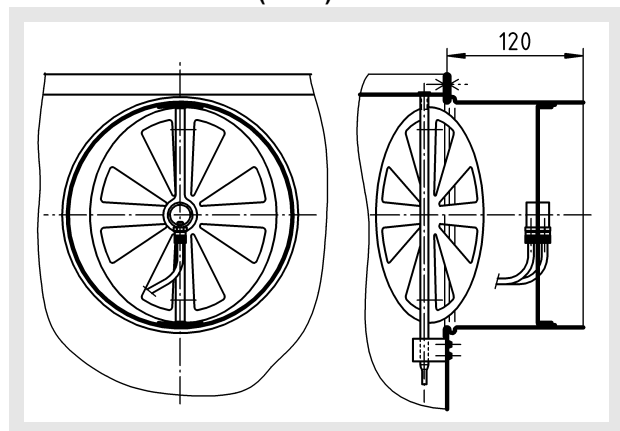
We would like to point out that only suitable cleaning materials may be used for cleaning the stainless steel design!

Swirl Diffuser with Integrated Light DQJA-SR-Z-L / DQJA-SQ-Z-L

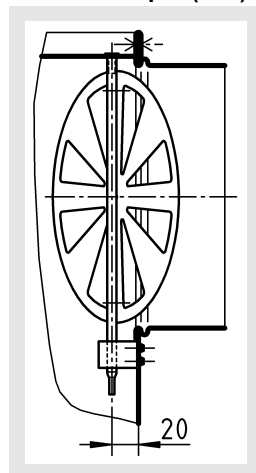
Dimensions of accessories

(at an extra charge)

Volumetric flow meter (-VME)

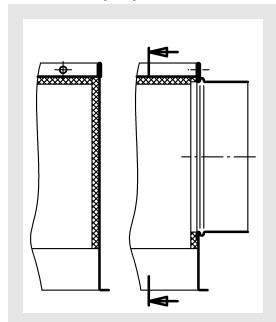


Throttle damper (-DK)

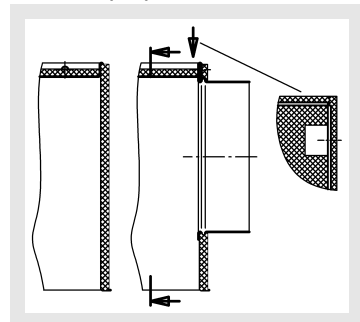


Insulation for SAK

internal (-li)

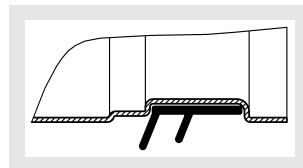


external (-la)



Rubber lip seal (-GD)

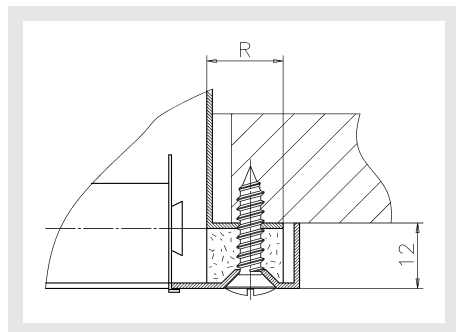
Detail Y



Fastening methods

Screw mounting (-SM)

Detail X



For screw mounting (SM), the swirl diffuser is fitted to the plenum box with 4 on-site countersunk screws (8 on-site countersunk screws for size 800).

For further fastening methods, please refer to the documentation of the swirl diffuser type DQJA-SR / SQ.

Swirl Diffuser with Integrated Light DQJA-SR-Z-L / DQJA-SQ-Z-L

Specification texts

Ceiling swirl diffuser type DQJA-SR-Z-L with integrated light for supply air, with square faceplate and circular blade pattern. The combination of light and diffuser creates an optically perfect appearance, but with less space requirements and cost-efficient installation. Especially suitable for use in comfort room requiring optimal air flow. Cooling and heating modes are possible. Consisting of a faceplate made of sheet steel provided with a high-quality powder coating painted in a RAL colour (RAL 9010, white, standard), a built-in light and central pivoting, aerodynamic and radially fitted air deflection blades, which are individually adjustable (without any tools) from the diffuser front side without dismantling the diffuser, in support profile design made of plastic RAL 9010 (white), RAL 9005 (black) or aluminium, painted individually or to the same RAL colour as the faceplate (subsequent adjustment of blades not possible). The blades are set ex works to an increased horizontal throw (throw pattern "A"), but can be individually adjusted to the situation if required. The throw can be enlarged by using extended circular aligned blades. Free cross-section, resistance and sound power level constant in all blade positions. With visible screw mounting (SM) and circumferential foam seal.

Product: SCHAKO **Type DQJA-SR-Z-L**

- For supply air, with square faceplate and square blade pattern, less noise level and pressure loss with same volumetric flow. Enlarged air throw area by aligning the blades to reach the corners.

Product: SCHAKO **type DQJA-SQ-Z-L**

- Faceplate made of stainless steel, front side brushed 1.4301 (V2A).

Accessories:

- Galvanised sheet steel plenum box (SAK-Z) with integrated perforated straightener, lateral connection piece and fixing lugs.
 - with throttle damper (-DK) in plenum box, adjustable from below, for simple air volume regulation without dismantling the faceplate.
 - with volumetric flow meter (-VME)
 - with ROB version (-ROB), removable diffuser plate, throttle damper and volumetric flow meter.
 - with rubber lip seal (-GD), made of special rubber, at the connection pipe.
 - with thermal insulation
 - internal (-li)
 - external (-la)
- Plastic ring cover painted to RAL 9010 (white).
- 1/4 cover (-AD), made of galvanised sheet steel for individual adaptation of the air flow to room conditions.