**DQJP**

Ceiling swirl diffuser in panel design

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## FUNCTION AND USE

This diffuser is particularly suitable **for installation in panelled ceilings**. The faceplate has the same dimensions as the single panels. **This gives the ceiling overall a harmonic appearance**. The diffuser is used especially for **comfort rooms**. The blades are fully adjustable at a later stage. By lifting the horizontal throw blades, the jets are lowered toward the vertical direction. Thus, the jet can be forced to a vertical throw, which facilitates its detachment from the ceiling.

Various throw patterns can be set ex works. Unless stated otherwise, air throw pattern "B" will be delivered. The diffuser is also suitable for systems with variable volumetric flow. The high exit velocities ensure a good coanda effect even at low air volumes to eliminate any possibility of air dumping.

### Special model

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

**For additional technical data, blade adjustment possibilities and special blade positions, please refer to the documentation of ceiling swirl diffuser type DQJ-Q.**

## MODELS

DQJP-...	faceplate in panel design ( $B_{max} = 900\text{mm}$ / $L_{max} = 1500\text{mm}$ )
...-SR-...	circular blade pattern
...-SQ-...	square blade pattern
...-Z-...-PT-...	for supply air, with divided blades (from NW 500, for model -SQ from NW 400)
...-Z-...-PS-...	for supply air, with continuous blades
...-A-...-P0-...	for exhaust air, without blades

## PROCESSING

### Faceplate

- sheet steel (-SB)
  - painted to RAL colour 9010 (white) (-9010)
  - painted to a different RAL colour, freely selectable (-xxxx) (at an extra charge)

### Blades

- Made of plastic
  - similar to RAL colour 9005 (black) (-L9005)
  - similar to RAL colour 9006 (grey) (-L9006)
  - similar to RAL colour 9010 (white) (-L9010)
- made of painted aluminium, RAL colour freely selectable (-Axxxx) (subsequent adjustment of the blades is not possible)
- without blades (-0000) (only possible for return air)

## MOUNTING

- Screw mounting (-SM) (standard)
  - with 4 raised countersunk head tapping screws (on site).

Concealed mounting (-VM)

- Traverse fixing (at an extra charge), by means of a cylinder screw M6 (hexagon socket head cap screw, according to DIN EN ISO 4762) on the plenum box.
- Only possible in combination with a plenum box.

## ACCESSORIES

### Plenum box (-SK-Q-15)

made of galvanised sheet steel (-SV, standard), with fixing lugs, in the nominal sizes NW 310 to 800.

- Type of air:
  - supply air (-Z), with integrated perforated straightener.
  - return air (-A), plenum box is painted inside to RAL 9005 (black).
- Fastening:
  - screw mounting (-SM) (standard).
  - concealed mounting (-VM).
- Damper:
  - without damper (-DK0) (standard).
  - With damper (-DK1) made of galvanised sheet steel, in the plenum box housing, adjustable, for simple air volume regulation.
  - With damper (-DK2), same as DK1 but with cable-operated adjustment.
- Rubber lip seal:
  - without rubber lip seal (-GD0) (standard).
  - with rubber lip seal (-GD1) made of special rubber, at the connection spigot.
- Volumetric flow meter:
  - Without volumetric flow meter (-VME0) (standard).
  - With volumetric flow meter (-VME1), holder made of galvanised sheet steel, measuring sensor made of plastic, connections made of aluminium.
- ROB version:
  - Without ROB version (-ROB0) (standard).
  - With ROB version (-ROB1). Removable diffuser plate, damper and volumetric flow meter.
- Insulation:
  - Without insulation (-I0)
  - with internal insulation (-Ii), thermal insulation inside the plenum box.
  - with external insulation (-Ia), thermal insulation at the outside of the plenum box.
- Height of plenum box:
  - Standard height of plenum box (-KHS).
  - height of plenum box in mm (-xxx) (height min. = spigot diameter + 102 mm, but at least 200 mm) (For SK-Q-15-Z-...-DK1/-DK2-...-S0, observe special height of plenum box (see p. 5)) (always with 3 digits).
- Spigot diameter:
  - Standard spigot diameter (-SDS).
  - Spigot diameter in mm, freely selectable (-xxx, always with 3 digits).
- Spigot position:
  - Spigot from above (-S0).
  - 1 lateral spigot on the box (-S1) (standard).
  - 2 lateral spigots, offset by 90° (-S2).
  - 2 lateral spigots, offset by 180° (-S3).
  - 2 spigots arranged next to each other (-S5).

### AIR THROW PATTERN

"A" : All blades in position 2.

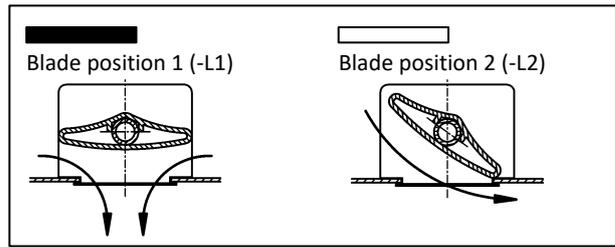
"B" : Blades in position 1+2, preset ex works.

"C" : Without blades (standard for return air)

"V" : All blades in position 1 (heating mode only)

The drill pattern 310 is not available with air throw pattern "B".

### Air throw pattern "B"

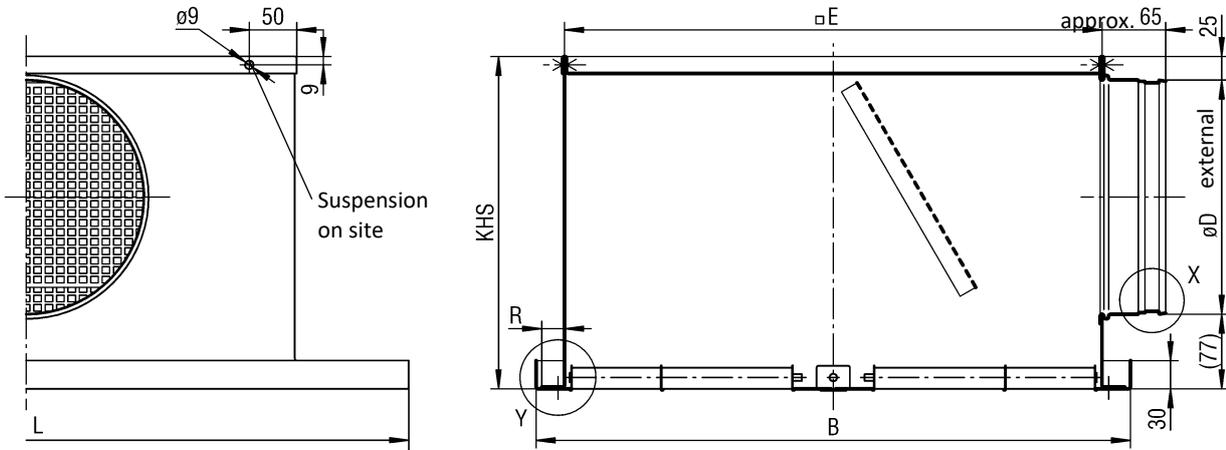


### Drill patterns with standard air throw pattern

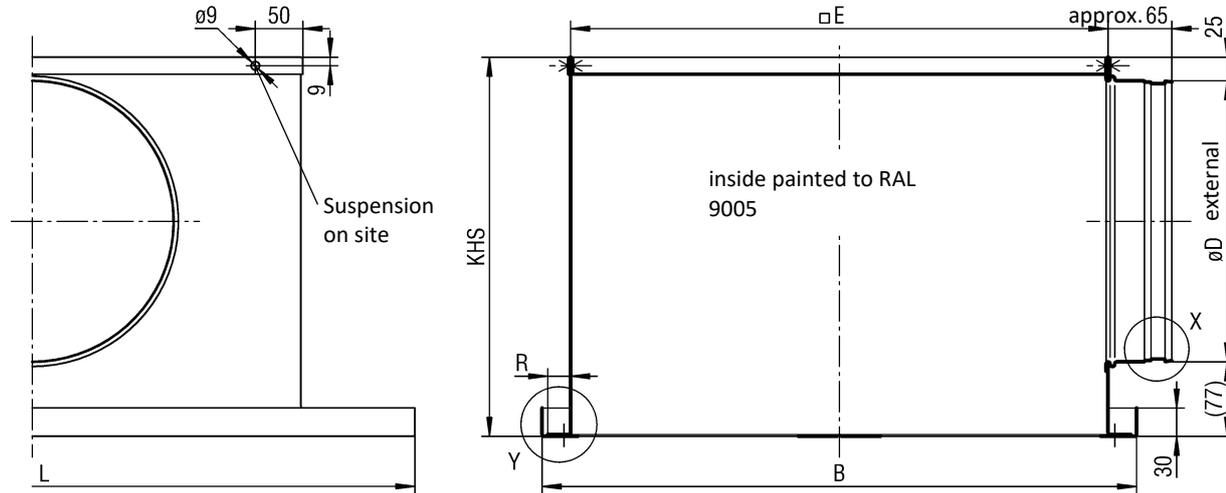
DQJP-SR-...-Z-...-PT divided blades	DQJP-SR-...-Z-...-PS continuous blades	DQJP-SQ-...-Z-...-PT divided blades	DQJP-SQ-...-Z-...-PS continuous blades
NW 310 ---	NW 310 	NW 310 ---	NW 310 
NW 400 ---	NW 400 	NW 400 	NW 400 ---
NW 500 	NW 500 	NW 500 	NW 500 ---
NW 600/625 	NW 600/625 	NW 600 / 625 	NW 600/625 ---
NW 800 	NW 800 	NW 800 	NW 800 ---

**DIMENSIONS**

**DQJP-S...-Z... with SK-Q-15-Z...**



**DQJP-S...-A... with SK-Q-15-A...**



**Available sizes**

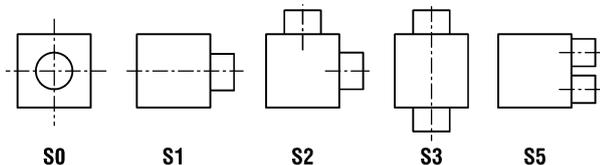
NW	L		B		□E	R	SK-Q-15-Z...		SK-Q-15-A...		∅D <sub>max</sub> for ...-S5
	min.	max.	min.	max.			KHS	∅D	KHS	∅D	
310	308	1500	308	900	290	8	260	158	300	198	98
400	398		398		370	12	260	158	300	198	138
500	498		498		470	12	300	198	350	248	198
600	598		598		570	12	350	248	400	298	248
625	623		623		570	24	350	248	400	298	248
800	798		798		770	12	455	353	455	353	353

KHS= standard height of plenum box

Special height of plenum box =  $\varnothing D + 102$  mm, but at least 200 mm

Note: For SK-Q-15-Z...-DK1/-DK2-...-S0, the height of plenum box changes to KHS=280 mm for NW310 and NW400 (see p. 5).

**Spigot position**

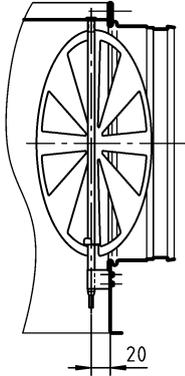


For detail X, see page 5. For detail Y see page 6.

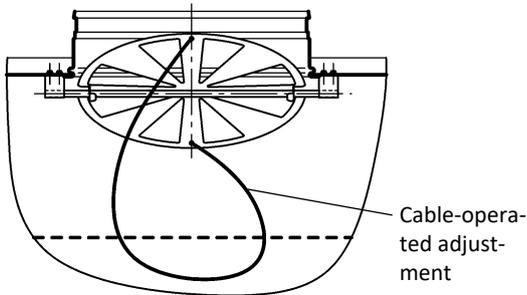
## DIMENSIONS OF ACCESSORIES

### Damper (-DK1 / -DK2), for SK-Q-...

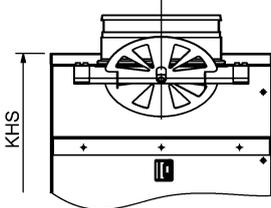
**DK1:** spigot position -S1 / -S2 / -S3 / -S5



**DK2:** spigot position -S0



**Height of plenum box with spigot from above (-S0)**

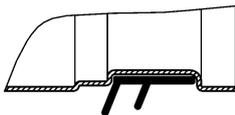


For the model with spigot from above (-S0) in combination with damper (-DK1 / -DK2), the height of plenum box KHS for SK-Q-15-Z-... changes for the following NW as follows.

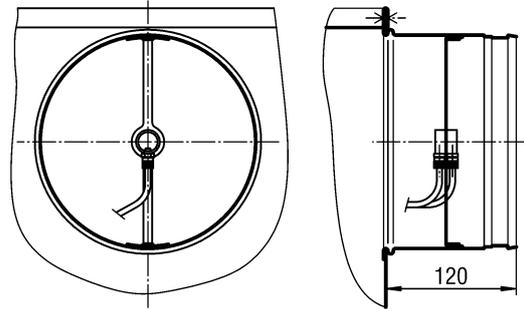
NW	KHS	øD
310	280	158
400	280	158

### Rubber lip seal (-GD1), for SK-Q-...

**Detail X**



### Volumetric flow meter (-VME1), for SK-Q-...

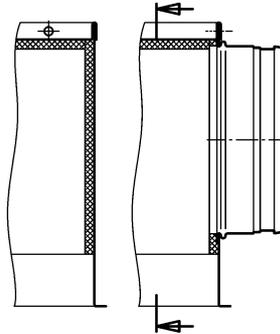


### ROB version (-ROB1), for SK-Q-...

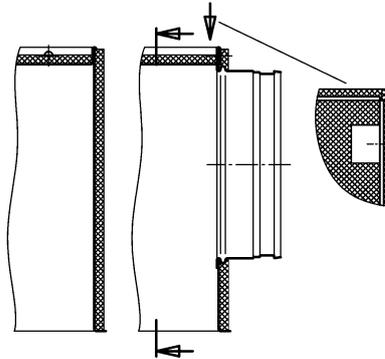
Removable diffuser plate, damper and volumetric flow meter.

### Insulation (-li / -la), for SK-Q-...

**internal (-li)**



**external (-la)**

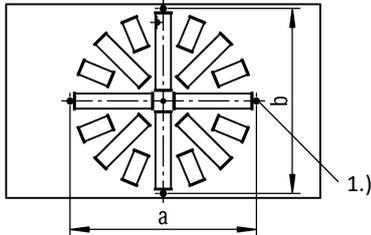


## FASTENING METHODS

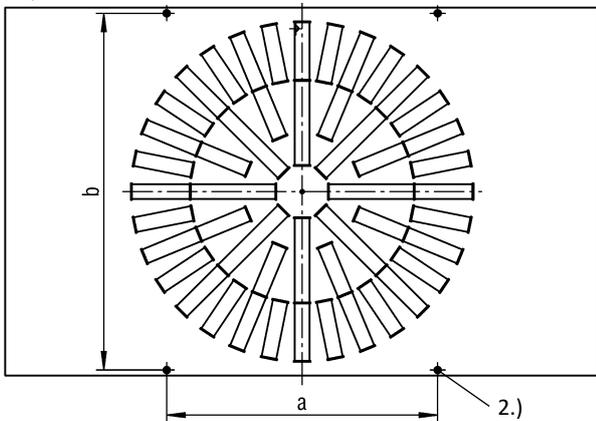
### Screw mounting (-SM) (standard)

For screw mounting, the swirl diffuser is fitted to the plenum box with 4 on-site slotted shallow-raised countersunk-head tapping screws.

#### DQJP-...-310-...

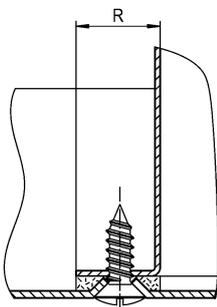


#### DQJP-...-400 to 800-...



- 1.) NW 310: indentation for slotted shallow-raised countersunk-head tapping screw ST 3.9 DIN ISO 7051 (on site)
- 2.) NW 400 to 800: indentation for slotted shallow-raised countersunk-head tapping screw ST 4.8 DIN ISO 7051 (on site)

#### Detail Y



#### Available sizes

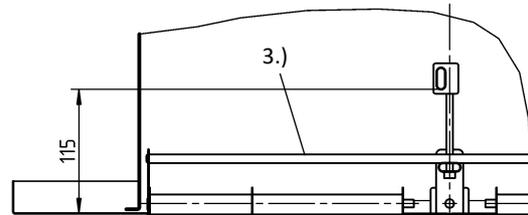
NW	a	b
310	294	294
400	238	380
500	338	480
600	438	580
625	463	580
800	498	780

Construction subject to change  
 No return possible

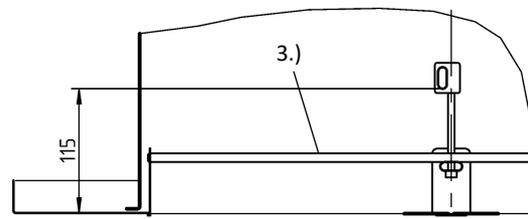
### concealed mounting (-VM, at extra cost)

In concealed mounting (-VM), the ceiling swirl diffuser is fixed to the plenum box by means of a pole brace and an M6 cylinder screw (hexagon socket head cap screw, according to DIN EN ISO 4762).

#### DQJP-...-Z-... (supply air)



#### DQJP-...-A-... (return air)



3.) drawn rotated by 45°

**Attention: The max. torque of the fastening screw is 0.4 Nm**

## DQJP ORDER CODE

01	02	03	04	05	06
Type	Blade pattern	Faceplate width	Faceplate length	Air throw	Drill pattern
<b>Example</b>					
DQJP	-SR	-600	-1200	-Z	-500

07	08	09	10	11	12
Material	Paint	Blades	Blade colour	Air throw pattern	Mounting
-SB	-9010	-PT	-L9005	-B	-VM

### Sample

**DQJP-SR-600-1200-Z-500-SB-9010-PT-L9005-B-VM**

Ceiling swirl diffuser type DQJP in panel design | circular blade pattern | faceplate width 600 mm | faceplate length 1200 mm | supply air | NW500 | faceplate made of sheet steel | faceplate painted to RAL9010 | divided blades blade | colour similar to RAL9005 black | air throw pattern B | concealed mounting

### ORDER DETAILS

#### 01 - Type

DQJP = Ceiling swirl diffuser in panel design

#### 02 - Blade pattern

SR = Circular

SQ = square

#### 03 - Faceplate width

xxx = Faceplate width (3 digits,  $B_{min}$  = drill pattern - 2 mm,  $B_{max}$  = 900 mm)

#### 04 - Faceplate length

xxxx = Faceplate length (4 digits,  $L_{min}$  = drill pattern - 2 mm,  $L_{max}$  = 1500 mm).

#### 05 - Air throw

Z = Supply air

A = Return air

#### 06 - Drill pattern

310 = NW310

400 = NW400

500 = NW500

600 = NW600

625 = NW625

800 = NW800

#### 07 - Material

SB = Sheet steel (standard)

#### 08 - Paint

9010 = RAL colour white (standard).

Xxxx = RAL colour can be freely selected.

#### 09 - Blades

PT = Divided blades (starting from NW 500 for model -SR, starting from NW 400 for model -SQ) (for supply air only).

PS = Continuous blades (NW 310 to 800 for model -SR, only NW 310 for model -SQ) (for supply air only).

P0 = Without blades (available only for return air).

#### 10 - Blade colour

L9005 = Blades made of plastic similar to RAL 9005 (black).

L9006 = Blades made of plastic similar to RAL9006 (grey).

L9010 = Blades made of plastic similar to RAL9010 (white).

Axxxx = Painted aluminium blades, RAL colour can be freely selected (subsequent adjustment of blades not possible)

00000 = Without blades (available only for return air).

#### 11 - Air throw pattern

A = All blades in position 2 (standard for NW310).

B = Blades in positions 1+2, set ex works (only available from NW 400).

C = Without blades (available only for return air).

V = All blades in position 1 (heating mode only).

#### 12 - Mounting

VM = Concealed mounting.

SM = Screw mounting (standard).

**ORDER CODE SK**

01	02	03	04	05	06	07	08
connecting box	Model	Air diffuser	Type of air	Nominal size	Fastening	Material	Damper
<b>Example</b>							
SK	-Q	-15	-Z	-500	-VM	-SV	-DK1

09	10	11	12	13	14	15
Rubber lip seal	Volumetric flow meter	ROB version	Insulation	Height of plenum box	Spigot diameter	Spigot position
-GD1	-VME1	-ROB0	-I0	-KHS	-SDS	-S1

**Sample**

**SK-Q-15-Z-500-VM-SV-DK1-GD1-VME1-ROB0-I0-KHS-SDS-S1**

Plenum box, square design | air diffuser DQJP | supply air | NW500 | concealed mounting | galvanised sheet steel | with damper | with rubber lip seal | with volumetric flow meter | without ROB model | without box insulation | standard height of plenum box | standard spigot diameter | 1 lateral spigot

**ORDER DETAILS**

**01 - Plenum box**

SK = plenum box, square design

**02 - Model**

Q = for square air diffusers

**03 - Air diffuser (must be ordered separately)**

15 = suitable for DQJP-...

**04 - Type of air**

Z = Supply air

A = Return air

**05 - Nominal size**

310 = NW310

400 = NW400

500 = NW500

600 = NW600

625 = NW625

800 = NW800

**06 - Fastening**

VM = Concealed mounting.

SM = Screw mounting (standard).

**07 - Material**

SV = galvanised sheet steel (standard)

**08 - Damper**

DK0 = without damper (standard).

DK1 = with damper.

DK2 = with damper and cable-operated adjustment (SZV) (for spigot position S0 only).

**09 - Rubber lip seal**

GD0 = without rubber lip seal (standard).

GD1 = with rubber lip seal.

**10 - Volumetric flow meter**

VME0 = without volumetric flow meter (standard).

VME1 = with volumetric flow meter

**11 - ROB version**

ROB0 = without ROB version (standard).

ROB1 = with ROB version.

**12 - Insulation**

I0 = without insulation (standard).

Ii = with box insulation inside.

Ia = with box insulation outside.

**13 - Height of plenum box**

KHS = standard height of plenum box

xxx = height of plenum box in mm (height min = spigot diameter +102 mm, but at least 200 mm) (For SK-Q-15-Z-...-DK1/-DK2-...-S0, observe special height of plenum box (see p. 5)) (always with 3 digits).

**14 - Spigot diameter**

SDS = spigot diameter (standard).

xxx = spigot diameter in mm, can be freely selected (always with 3 digits).

**15 - Spigot position**

S0 = spigot from above.

S1 = 1 lateral spigot on the box (standard).

S2 = 2 lateral spigots, offset by 90°.

S3 = 2 lateral spigots, offset by 180°.

S5 = 2 spigots arranged next to each other.

## SPECIFICATION TEXT

Ceiling swirl diffuser type DQJP-SR-...-Z-... integrated in panelled ceilings for supply air, square design, circular blade pattern. The faceplate has the same dimensions as the ceiling panels for a uniform ceiling appearance and time- and cost-saving assembly. Particularly suitable for installation in comfort rooms with high air change rates and for VAV installations with variable volumetric flows (between 40-100%).

Cooling and heating modes are possible.

Consisting of a faceplate in panel size made of sheet steel (-SB) with a high-quality powder coating to a RAL colour, white (-9010, standard) or a freely selectable RAL colour (xxxx).

With central pivoting, aerodynamic and radial fitted air deflection blades, which are individually adjustable without any tools from the diffuser front side without dismounting the diffuser, in aerofoil wing profile.

Free cross-section, resistance and sound power level constant in all blade positions.

Product: SCHAKO type **DQJP-SR-...-Z-...**

- for return air, without air deflection blades, circular perforation.

Product: SCHAKO type **DQJP-SR-...-A-...**

- for supply air, square blade pattern.

Product: SCHAKO type **DQJP-SQ-...-Z-...**

- for return air, without air deflection blades, square perforation.

Product: SCHAKO type **DQJP-SQ-...-A-...**

**Faceplate width** (-xxx, 3 digits):  $B = \underline{\hspace{2cm}}$  mm  
( $B_{\min}$  = drill pattern - 2 mm,  $B_{\max}$  = 900 mm)

**Frontplate length** (-xxxx, 4 digits):  $L = \underline{\hspace{2cm}}$  mm  
( $L_{\min}$  = drill pattern - 2 mm,  $L_{\max}$  = 1500 mm)

### Blades:

- divided blades (-PT) (starting from drill pattern NW 500 for model -SR, starting from drill pattern NW 400 for model -SQ, only for supply air).
- continuous blades (-PS) (starting from drill pattern NW 310 to 800 for model -SR, only drill pattern NW 310 for model -SQ, for supply air only).
- without blades (-PO, available only for return air).

### Blade colour:

- blades made of plastic
  - similar to RAL 9005 (black, -L9005)
  - similar to RAL 9006 (grey, -L9006)
  - similar to RAL 9010 (white, L9010)
- = painted aluminium blades, RAL colour can be freely selected (-Axxxx, subsequent adjustment of blades not possible).
- without blades (only possible for return air).

### Air throw pattern:

- For supply air model:
  - "A" (-A), all blades in position 2.
  - "B" (-B), blades in positions 1+2, preset ex works. (Depending on the size, the air throw pattern "B" can be selected, which is distinguished by higher induction).
  - „V“ (-V), all blades in position 1 (heating mode only).
- For return air model:
  - „C“ (-C), without blades.

### Mounting:

- Screw mounting (-SM) (standard), visible with circumferential seal.
- Concealed mounting (-VM), made of aerodynamic aluminium profile suspended at 6 points, on available with plenum box.

### Accessories:

Plenum box (SK-Q-15-...) made of galvanised sheet steel (-SV, standard), with suspension lugs, in the nominal sizes NW310 to 800.

-- Type of air:

- supply air (-Z), with integrated perforated straightener.
- return air (-A), plenum box is painted inside to RAL 9005 (black).

-- Fastening:

- screw mounting (-SM) (standard).
- concealed mounting (-VM).

-- Damper:

- without damper (-DK0) (standard).
- With damper (-DK1) made of galvanised sheet steel, in the plenum box housing, adjustable, for simple air volume regulation.
- With damper (-DK2), same as DK1 but with cable-operated adjustment (only for spigot position -S0).

-- Rubber lip seal:

- without rubber lip seal (-GD0) (standard).
- with rubber lip seal (-GD1) made of special rubber, at the connection spigot.

-- Volumetric flow meter:

- Without volumetric flow meter (-VME0) (standard).
- With volumetric flow meter (-VME1), holder made of galvanised sheet steel, measuring sensor made of plastic, connections made of aluminium.

-- ROB version:

- Without ROB version (-ROB0) (standard).
- With ROB version (-ROB1). Removable diffuser plate, damper and volumetric flow meter.

-- Insulation:

- Without insulation (-I0)
- with internal insulation (-Ii), thermal insulation inside the plenum box.
- with external insulation (-Ia), thermal insulation at the outside of the plenum box.

-- Height of plenum box:

- Standard height of plenum box (-KHS).
- height of plenum box in mm (-xxx) (height min. = spigot diameter + 102 mm, but at least 200 mm) (For SK-Q-15-Z-...-DK1/-DK2-...-S0, observe special height of plenum box (see p. 5)) (always with 3 digits).

-- Spigot diameter:

- Standard spigot diameter (-SDS).
- Spigot diameter in mm, freely selectable (-xxx, always with 3 digits).

-- Spigot position:

- Spigot from above (-S0).
- 1 lateral spigot on the box (-S1) (standard).
- 2 lateral spigots, offset by 90° (-S2).
- 2 lateral spigots, offset by 180° (-S3).
- 2 spigots arranged next to each other (-S5).