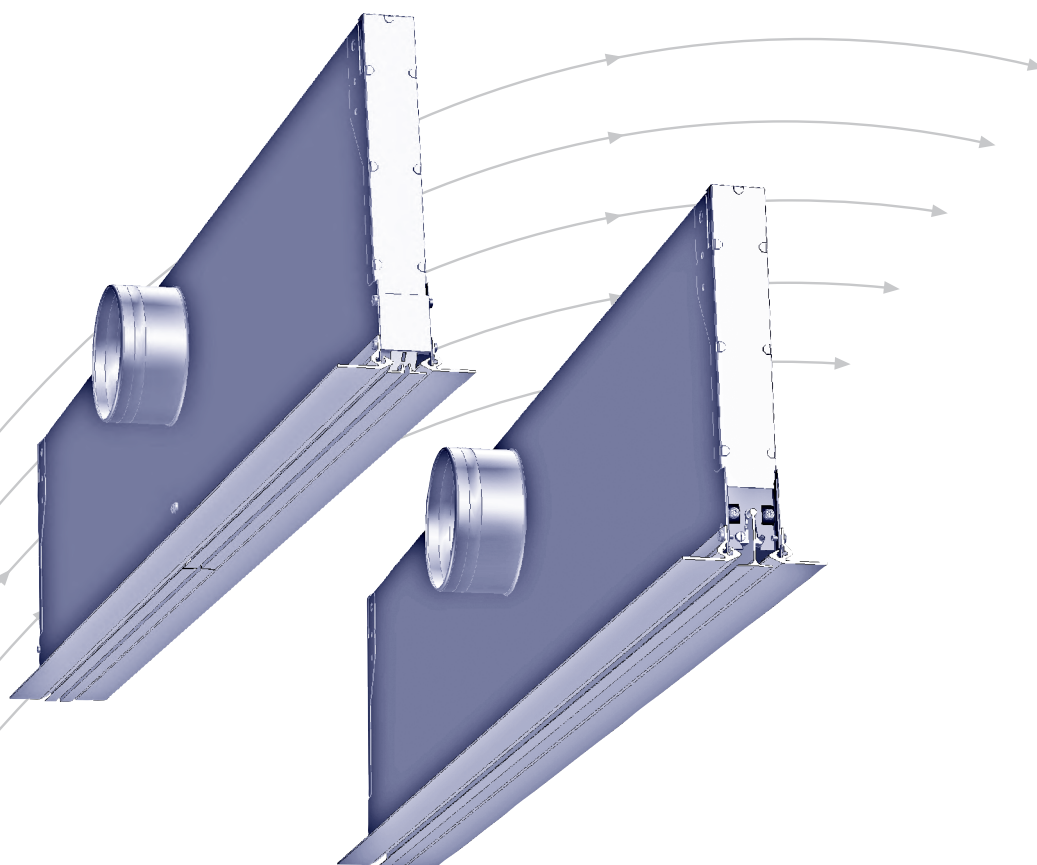


# Slot diffusers

Type SB... / SB1...



**TROX<sup>®</sup> TECHNIK**



The art of handling air

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## Safety instructions

### CAUTION!

**Risk of injury from sharp edges and corners, ridges and thin-walled sheet metal parts!**

- Proceed carefully with all work.
- Wear protective gloves, safety shoes and protective helmet.

### WARNING!

**Danger from incorrect use. Misuse of the product may lead to dangerous situations.**

The product must not be used:

- in areas subject to explosion hazards;
- in the open air without sufficient protection against weather effects;
- in atmospheres that may have a damaging and/or corrosive effect on the product due to scheduled or unscheduled chemical reactions.

### CAUTION!

**Damage to the product due to improper handling. Check the device for damage and contamination prior to operation!**

Improper handling may lead to considerable material damage of the product.

- Do not use any acid or abrasive cleaning agents.
- Adhesives from sticky tape may lead to colour damage.
- Excessive moisture may lead to colour damage and corrosion.
- Use only cleaning agents, greases and oils that are expressly specified.

## Realisation

Slot diffuser type SB... with light metal profiles and built-in fixed resistance, connecting boxes with spigots made of galvanized steel plate height 220, or 270 mm, frames and blades made of light metal, colourless, anodized according to VSA 200 or lacquered (preferred colour: RAL 9010, matt, 25% brilliance).

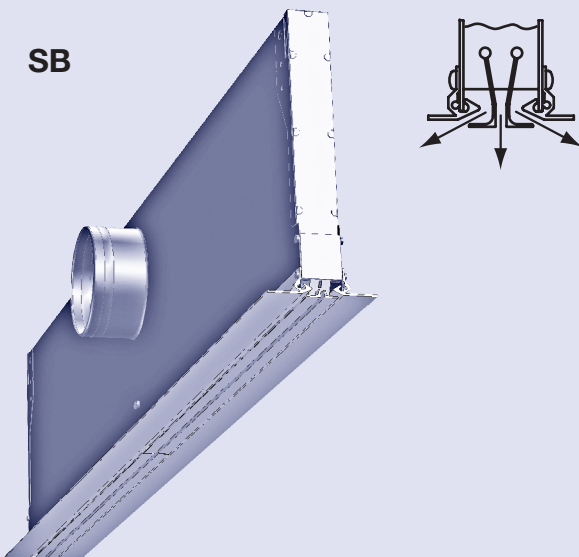
## Application

Slot diffusers are air supply elements which can be integrated relatively harmoniously in ceilings. They are suitable for air conditioning in large offices, training rooms, laboratories, passenger halls etc. They set themselves apart through unique discharge characteristics.

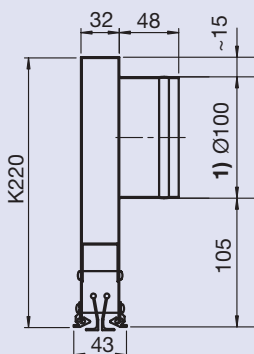
- One, two or three discharge devices with adjustable vanes.
- Adjustable for variable air volume flows from 30–100% and  $\Delta t$  up to -10 K.

Characteristics of SB...: two air vanes  
(subdivided in length, division 500...~625 mm)

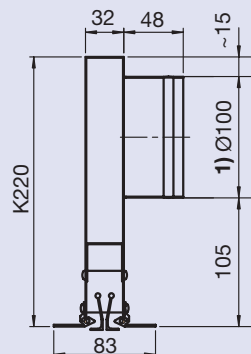
SB



SBFK...



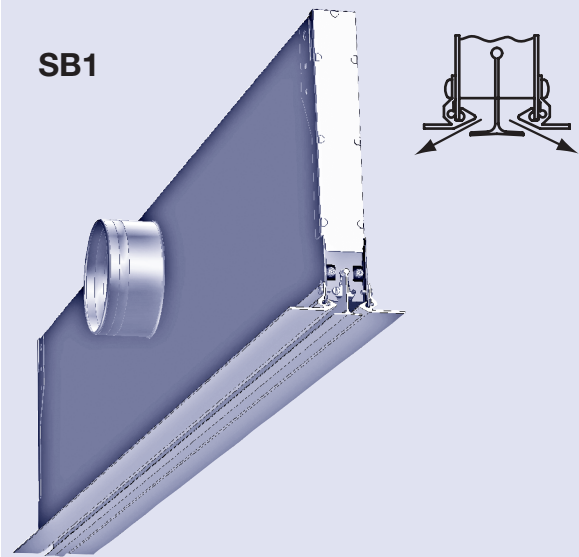
SBWK...



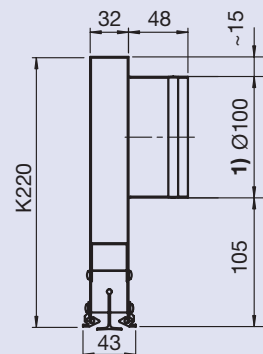
- 1) - For spigots  $\varnothing 125$  mm or  $\varnothing 160$  mm, a box height K270 mm required  
- Spigots  $\varnothing 80$  mm available

Characteristics of SB1...: one air vane  
(not subdivided in length)

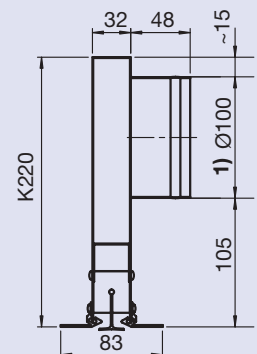
SB1



SB1FK...



SB1WK...



### Realisation as dummy:

Total height 100 mm (without spigots, with suspension clamps), type designations see page 8.

# Discharge positions · Dimensions

## Discharge positions type SB...

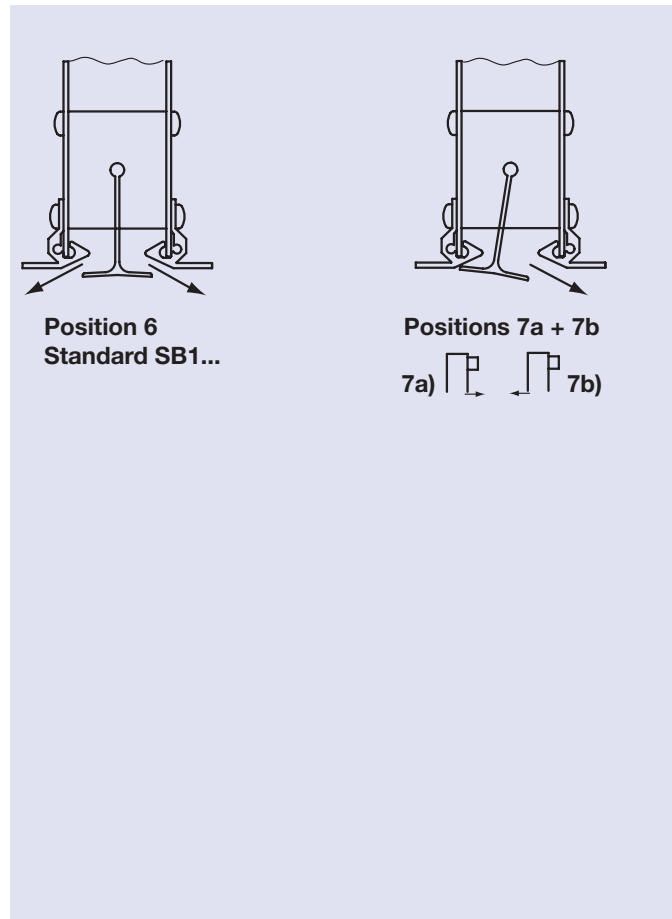
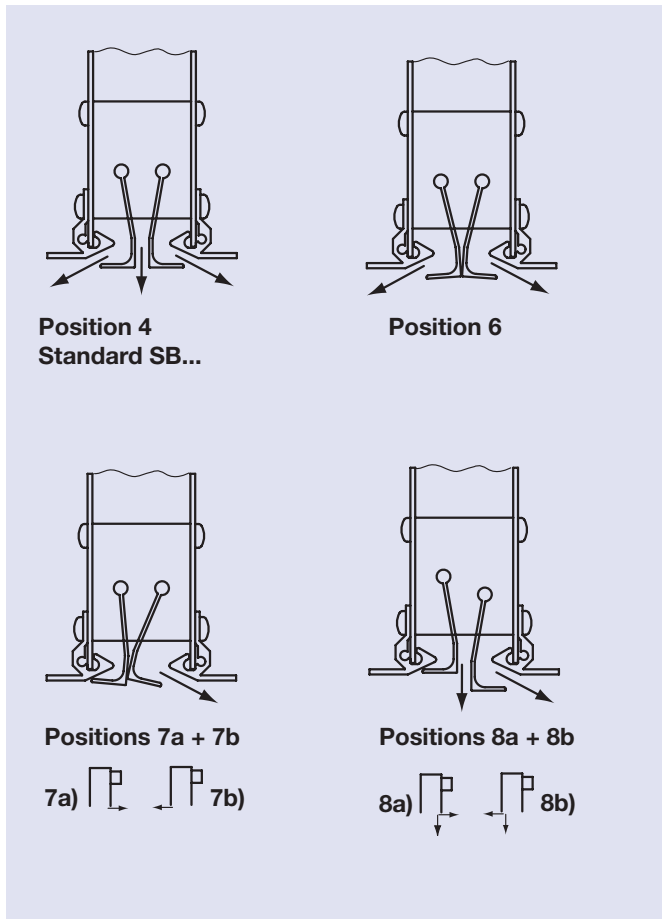
- Both vanes are fixed with guides
- Standard discharge position 4, discharge on three sides
- Standard discharge position 6: on two sides, flat, blowing out along ceiling
- Position 7a: Horizontal air stream on spigot side
- Position 7b: Horizontal air stream **not** on spigot side
- Position 8a: Horizontal air stream on spigot side, discharge on two sides
- Position 8b: Horizontal air stream **not** on spigot side, discharge on two sides

Changing the discharge positions using a guide.

Other discharge positions on request.

## Discharge positions type SB1...

- The swivelling air vane is adjustable on the front side, arrests by itself and can be fixed in the discharge position 6.
- Standard discharge position 6: on two sides, flat, blowing out along ceiling
- Position 7a: horizontal air stream on spigot side
- Position 7b: horizontal air stream **not** on spigot side



## Dimensions

The slot diffusers are supplied in the preferred lengths of 1000, 1250, 1500, 1750 and 2000 mm.

Other lengths available on request.

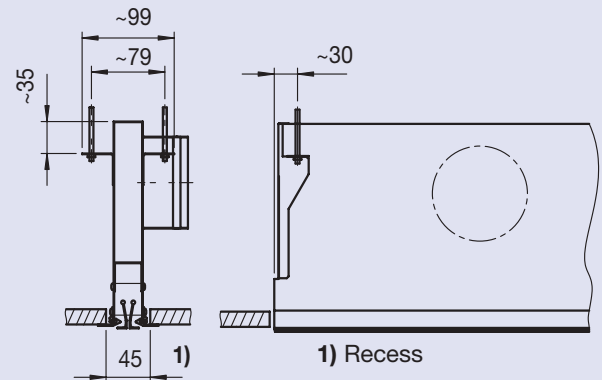
Lengths over 2000 mm are supplied in sections.

They can be joined through the use of grooved pins or clamps flush with a continuous track.

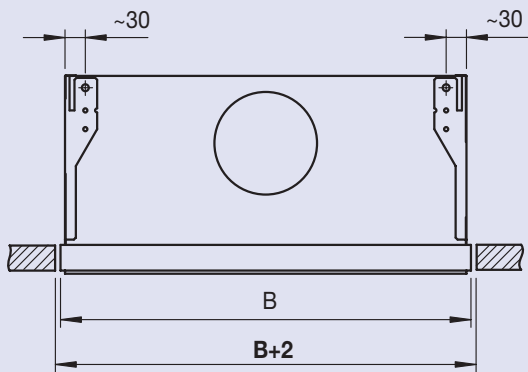
The types SBW...and SB1W are available with or without front angle section lateral brace (curved angle), available edge width 16 mm.

## Installation examples for SB... and SB1...

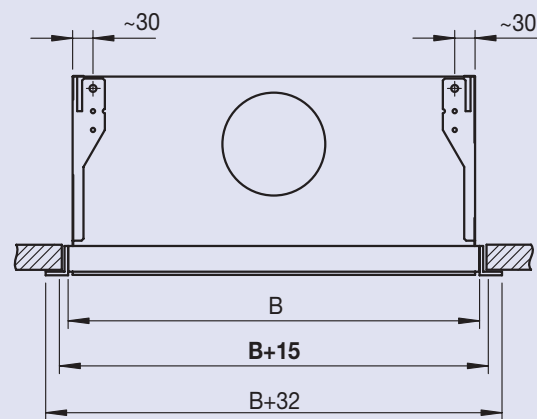
Standard model  
Suspension clamps (normal model)  
lateral on plenum box



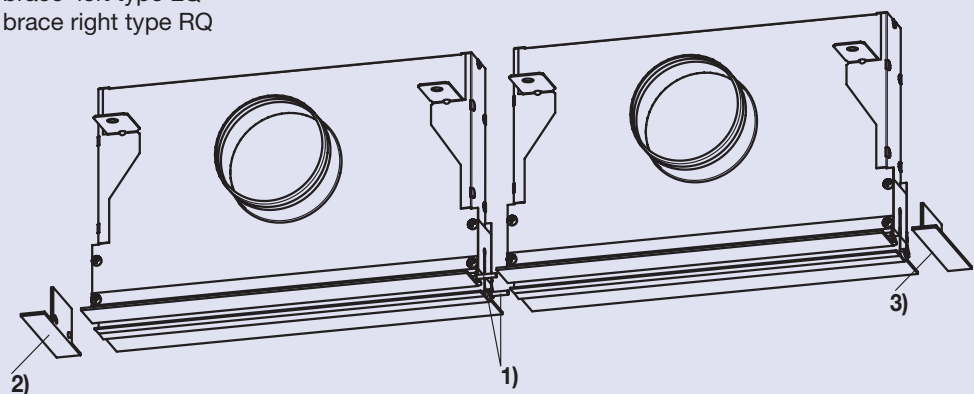
Recess dimensions **without** angle section lateral brace



Recess dimensions **with** angle section lateral brace

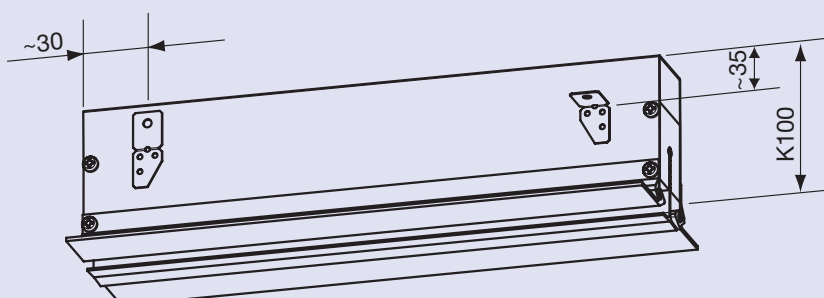


- 1) Grooved pins (joint connection point)
- 2) Angle section lateral brace left type LQ
- 3) Angle section lateral brace right type RQ

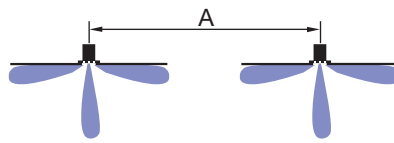


### Dummy SB...-K60

- **without** spigots
- **with** suspension clamps



# Quick selection



Slot diffuser type SB... position 4

| Dimension | A <sub>eff</sub>  | q <sub>v</sub> [l/s,m]                 | 13.9 | 16.7 | 19.4 | 22.2 | 25.0 | 27.8 | 30.6 | 33.3 |      |      |      |      |      |      |
|-----------|-------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| [mm]      | [m <sup>2</sup> ] | Ḃ [m <sup>3</sup> /h,m]                | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  |      |      |      |      |      |      |
| SB_St4    | 0.0105            | Δp <sub>t</sub> [Pa]                   | 7    | 10   | 14   | 18   | 23   | 29   | 35   | 42   |      |      |      |      |      |      |
|           |                   | L <sub>wA</sub> [dB(A)]                | <20  | <20  | 22   | 27   | 31   | 35   | 39   | 42   |      |      |      |      |      |      |
|           |                   | L <sub>0.5</sub> /L <sub>0.3</sub> [m] | -    | -    | -    | 1.6  | -    | 1.7  | 1.6  | 1.8  | 1.6  | 2.0  | 1.6  | 2.3  | 1.7  | 2.5  |
|           |                   | Ḃ <sub>H1</sub> [m/s]                  | -    | -    | -    | 0.13 | -    | 0.15 | 0.17 | 0.16 | 0.20 | 0.18 | 0.22 | 0.19 | 0.24 | 0.21 |
| Distance  | A                 | [m]                                    | -    | -    | -    | 3.2  | -    | 3.4  | 3.2  | 3.7  | 3.1  | 4.1  | 3.2  | 4.5  | 3.4  | 5.0  |



Slot diffuser type SB... position 6

| Dimension | A <sub>eff</sub>  | q <sub>v</sub> [l/s,m]                 | 13.9 | 16.7 | 19.4 | 22.2 | 25.0 | 27.8 | 30.6 | 33.3 |      |      |      |      |      |      |
|-----------|-------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| [mm]      | [m <sup>2</sup> ] | Ḃ [m <sup>3</sup> /h,m]                | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  |      |      |      |      |      |      |
| SB_St6    | 0.0080            | Δp <sub>t</sub> [Pa]                   | 8    | 11   | 15   | 20   | 25   | 31   | 38   | 45   |      |      |      |      |      |      |
|           |                   | L <sub>wA</sub> [dB(A)]                | <20  | <20  | 23   | 28   | 32   | 36   | 40   | 43   |      |      |      |      |      |      |
|           |                   | L <sub>0.5</sub> /L <sub>0.3</sub> [m] | -    | -    | -    | 1.6  | -    | 1.6  | 1.6  | 1.7  | 1.6  | 1.9  | 1.6  | 2.0  | 1.6  | 2.2  |
|           |                   | Ḃ <sub>H1</sub> [m/s]                  | -    | -    | -    | 0.13 | -    | 0.14 | 0.17 | 0.16 | 0.19 | 0.17 | 0.21 | 0.17 | 0.23 | 0.18 |
| Distance  | A                 | [m]                                    | -    | -    | -    | 3.2  | -    | 3.3  | 3.2  | 3.5  | 3.1  | 3.8  | 3.2  | 4.1  | 3.3  | 4.4  |



Slot diffuser type SB... positions 7a + 7b

| Dimension | A <sub>eff</sub>  | q <sub>v</sub> [l/s,m]                 | 13.9 | 16.7 | 19.4 | 22.2 | 25.0 | 27.8 | 30.6 | 33.3 |      |      |      |      |      |      |      |      |
|-----------|-------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| [mm]      | [m <sup>2</sup> ] | Ḃ [m <sup>3</sup> /h,m]                | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  |      |      |      |      |      |      |      |      |
| SB_St7    | 0.0075            | Δp <sub>t</sub> [Pa]                   | 9    | 13   | 18   | 24   | 30   | 38   | 46   | 55   |      |      |      |      |      |      |      |      |
|           |                   | L <sub>wA</sub> [dB(A)]                | <20  | 20   | 26   | 30   | 34   | 38   | 41   | 44   |      |      |      |      |      |      |      |      |
|           |                   | L <sub>0.5</sub> /L <sub>0.3</sub> [m] | -    | -    | -    | 1.6  | -    | 1.6  | -    | 1.7  | 1.6  | 1.9  | 1.6  | 2.0  | 1.6  | 2.2  | 1.7  | 2.4  |
|           |                   | Ḃ <sub>H1</sub> [m/s]                  | -    | -    | -    | 0.12 | -    | 0.14 | -    | 0.15 | 0.19 | 0.17 | 0.21 | 0.17 | 0.23 | 0.18 | 0.25 | 0.19 |
| Distance  | A                 | [m]                                    | -    | -    | -    | 3.2  | -    | 3.2  | -    | 3.4  | 3.1  | 3.7  | 3.2  | 4.0  | 3.3  | 4.4  | 3.4  | 4.8  |



Slot diffuser type SB... positions 8a + 8b

| Dimension | A <sub>eff</sub>  | q <sub>v</sub> [l/s,m]                 | 13.9 | 16.7 | 19.4 | 22.2 | 25.0 | 27.8 | 30.6 | 33.3 |      |      |      |      |      |      |      |      |
|-----------|-------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| [mm]      | [m <sup>2</sup> ] | Ḃ [m <sup>3</sup> /h,m]                | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  |      |      |      |      |      |      |      |      |
| SB_St8    | 0.0095            | Δp <sub>t</sub> [Pa]                   | 7    | 10   | 14   | 18   | 23   | 29   | 35   | 42   |      |      |      |      |      |      |      |      |
|           |                   | L <sub>wA</sub> [dB(A)]                | <20  | <20  | 22   | 27   | 31   | 35   | 39   | 42   |      |      |      |      |      |      |      |      |
|           |                   | L <sub>0.5</sub> /L <sub>0.3</sub> [m] | -    | -    | -    | 1.6  | -    | 1.6  | -    | 1.7  | 1.6  | 1.9  | 1.6  | 2.1  | 1.6  | 2.4  | 1.7  | 2.6  |
|           |                   | Ḃ <sub>H1</sub> [m/s]                  | -    | -    | -    | 0.12 | -    | 0.14 | -    | 0.15 | 0.18 | 0.17 | 0.21 | 0.19 | 0.23 | 0.20 | 0.25 | 0.22 |
| Distance  | A                 | [m]                                    | -    | -    | -    | 3.2  | -    | 3.2  | -    | 3.5  | 3.8  | 3.8  | 3.2  | 4.3  | 3.3  | 4.7  | 3.5  | 5.2  |

# Quick selection · Texts for tenders

## Slot diffusers type SB1... position 6



| Dimension | A <sub>eff</sub> | q <sub>v</sub> [l/s,m]                 | 13.9 | 16.7 | 19.4 | 22.2 | 25.0 | 27.8 | 30.6 | 33.3 |      |      |      |      |      |      |
|-----------|------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| [mm]      | [m²]             | Ḃ [m³/h,m]                             | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  |      |      |      |      |      |      |
| SB1_St6   | 0.0083           | Δp <sub>t</sub> [Pa]                   | 8    | 11   | 15   | 20   | 25   | 31   | 38   | 45   |      |      |      |      |      |      |
|           |                  | L <sub>wA</sub> [dB(A)]                | <20  | <20  | 23   | 28   | 32   | 36   | 40   | 43   |      |      |      |      |      |      |
|           |                  | L <sub>0.5</sub> /L <sub>0.3</sub> [m] | -    | -    | -    | 1.6  | -    | 1.6  | 1.6  | 1.8  | 1.6  | 1.9  | 1.6  | 2.1  | 1.6  | 2.2  |
|           |                  | v̄ <sub>H1</sub> [m/s]                 | -    | -    | -    | 0.13 | -    | 0.14 | 0.17 | 0.16 | 0.19 | 0.17 | 0.21 | 0.17 | 0.23 | 0.18 |
| Distance  | A                | [m]                                    | -    | -    | -    | 3.2  | -    | 3.3  | 3.2  | 3.5  | 3.1  | 3.8  | 3.2  | 4.1  | 3.3  | 4.4  |

## Slot diffusers type SB1... positions 7a + 7b



| Dimension | A <sub>eff</sub> | q <sub>v</sub> [l/s,m]                 | 13.9 | 16.7 | 19.4 | 22.2 | 25.0 | 27.8 | 30.6 | 33.3 |      |      |      |      |      |      |      |      |
|-----------|------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| [mm]      | [m²]             | Ḃ [m³/h,m]                             | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  |      |      |      |      |      |      |      |      |
| SB1_St7   | 0.0076           | Δp <sub>t</sub> [Pa]                   | 9    | 13   | 18   | 24   | 30   | 38   | 46   | 55   |      |      |      |      |      |      |      |      |
|           |                  | L <sub>wA</sub> [dB(A)]                | <20  | 20   | 26   | 30   | 34   | 38   | 41   | 44   |      |      |      |      |      |      |      |      |
|           |                  | L <sub>0.5</sub> /L <sub>0.3</sub> [m] | -    | -    | -    | 1.6  | -    | 1.6  | -    | 1.7  | 1.6  | 1.9  | 1.6  | 2.0  | 1.6  | 2.2  | 1.7  | 2.4  |
|           |                  | v̄ <sub>H1</sub> [m/s]                 | -    | -    | -    | 0.12 | -    | 0.14 | -    | 0.15 | 0.19 | 0.17 | 0.21 | 0.17 | 0.23 | 0.18 | 0.25 | 0.19 |
| Distance  | A                | [m]                                    | -    | -    | -    | 3.2  | -    | 3.2  | -    | 3.4  | 3.1  | 3.7  | 3.2  | 4.0  | 3.3  | 4.4  | 3.4  | 4.8  |

|                             |                           |   |      |   |
|-----------------------------|---------------------------|---|------|---|
| Base for v̄ <sub>H1</sub> : | Room height H             | = | 2.9  | m |
|                             | Height of occupied zone   | = | 1.8  | m |
|                             | H <sub>1</sub>            | = | 1.1  | m |
|                             | Difference of temperature | = | -8.0 | K |

## Text for tendering purposes

### Types SBF... and SBW...

Slot diffuser consisting of frame profiles and **two adjustable air vanes** (can be swivelled in vertical position, adjustable).

Material: aluminium lacquered according to RAL 9010, mat, 25% brilliance or colourless anodized.

Plenum box, suspension clamps and spigot connection made of galvanized steel plate, height 220 or 270 mm.

Spigot connection with built-in fixed resistance.

With or without angle section lateral braces (curved angle) on the beginning or at the end.

**SBF** K220... Spigot connection Ø80 or Ø100 mm

**SBF** K270... Spigot connection Ø100, Ø125 or Ø160 mm

**SBW** K220... Spigot connection Ø80 or Ø100 mm

**SBW** K270... Spigot connection Ø100, Ø125 or Ø160 mm

Discharge position 4, 6, 7a, 7b, 8a or 8b

Vaness fixed with guides

### Options

- Front bracket for belt-lock assembly
- Spigots separately
- Special suspension angle
- Other discharge positions (only with SB...)

### Types SB1F... and SB1W...

Slot diffuser consisting of frame profiles and **one swivelling air vane**.

Material: aluminium lacquered according to RAL 9010, mat, 25% brilliance or colourless anodized.

Plenum box, suspension clamps and spigot connection made of galvanized steel plate, height 220 or 270 mm.

Spigot connection with built-in fixed resistance.

With or without angle section lateral braces (curved angle) on the beginning or at the end.

**SB1F** K220... Spigot connection Ø80 or Ø100 mm

**SB1F** K270... Spigot connection Ø100, Ø125 or Ø160 mm

**SB1W** K220... Spigot connection Ø80 or Ø100 mm

**SB1W** K270... Spigot connection Ø100, Ø125 or Ø160 mm

Discharge position 6, 7a or 7b

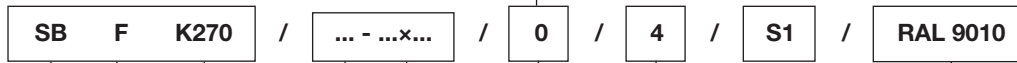
### Options

- Front bracket for belt-lock assembly
- Spigots separately
- Special suspension angle

# Order details

## Order codes

No details for standard products



**SB** Slot diffuser with **two** swivel blades

**SB1** Slot diffuser with **one** swivel blade

**F** = Flat frame  
**W** = Angle frame

**K220** = Air supply plenum box height K220, for Ø80 + Ø100 mm)

**K270** = Air supply plenum box height K220 (for Ø125 + Ø160 mm)

**K60** = Dummy, plenum box height K60

**...x...**  
Number of spigots × nom. diameter

**...** Nominal size in mm (Preferred nominal size 1000, 1250, 1500, 1750 and 2000 mm)

RAL 9010 mat, 25% brilliance or NCS...

**0** = Colourless anodized according to E0-VSA200 (Standard)

**S1** = Lacquered according to RAL... or NCS...

**S2** = Anodized according to E0...

**4** = Discharge position 4 with **SB...** = Standard

**6** = Discharge position 6 with **SB1...** = Standard

**7a** = Discharge position 7a } **SB1**

**7b** = Discharge position 7b }

**8a** = Discharge position 8a } **SB**

**8b** = Discharge position 8b }

**0** = Without angle section lateral brace (standard)

**BQ** = With angle section lateral brace on both sides

**RQ** = With angle section lateral brace on right side

**LQ** = With angle section lateral brace on left side

## Order examples

20 off SBFK220 / 1500-2×100 / 0 / 4 / S1 / RAL9010

60 off SB1WK220 / 1750-2-100 / BQ / 6 / S1 / RAL9008