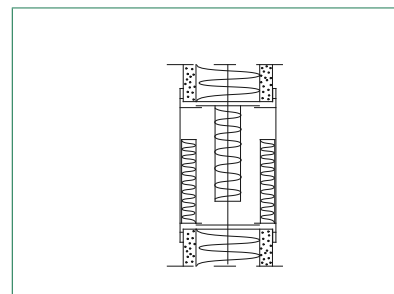


## SK1 Transfer air device



SK1 is used for air transfer between rooms when sound attenuation in the air flow opening is needed. SK1 is usually installed into the wall above a door.

### Quick Selection

Size	Air flow (l/s) at 10 Pa	Air flow (l/s) at 15 Pa
400-150	9	11
500-150	13	16
600-150	20	24
700-150	27	33
800-150	35	42
900-150	45	55
1000-150	52	65

### Specifications

Low pressure drop

High level of sound attenuation

Adjustable to various wall thicknesses

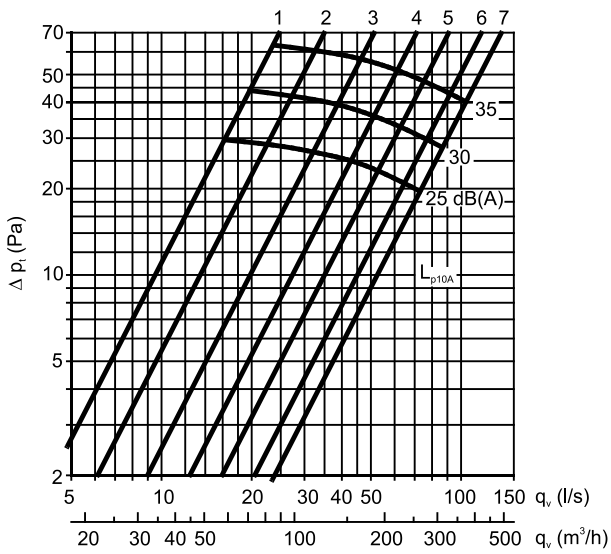
Aesthetic design

### Product code example

Transfer air device SK1-400-150

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### Selection diagram



SK1	
1.	400-150
2.	500-150
3.	600-150
4.	700-150
5.	800-150
6.	900-150
7.	1000-150

### Sound attenuation

Size	Unit attenuation $D_1$ (dB)					
	Middle frequency of octave band $f$ (Hz)					
	125	250	500	1000	2000	4000
400-150	24	22	21	34	42	42
500-150	23	20	20	33	42	42
600-150	21	19	19	31	42	42
700-150	20	18	19	30	41	42
800-150	19	18	18	30	40	42
900-150	18	18	17	30	40	42
1000-150	17	17	17	28	38	42
Tolerance $\pm$	2	2	2	2	2	2

The unit attenuation  $D_1$  is a value in accordance with the Nordtest method NT ACOU 037. The total attenuation of the wall between parallel rooms by each frequency band is obtained according to the following formula:

$$R_p = 10 \times \log[S/(S \times 10^{-R/10} + 10^{-D_1/10})]$$

where

$R_p$  = Total attenuation by octave band in question (dB)

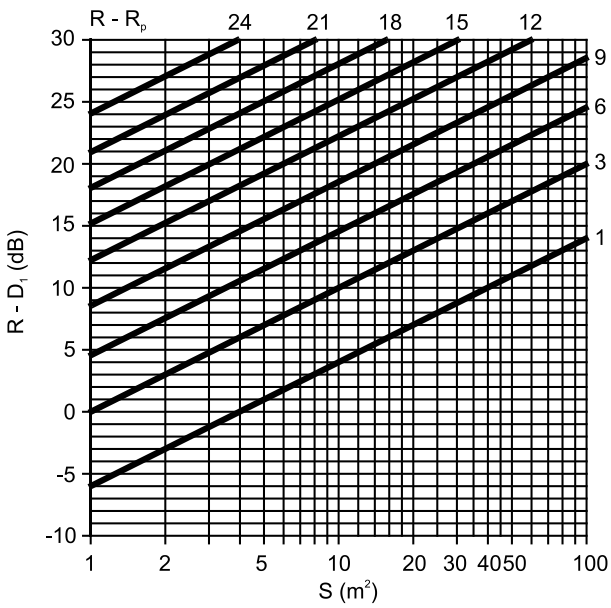
$S$  = Total area of the wall without the device (m<sup>2</sup>)

$R$  = Attenuation of the wall construction (dB)

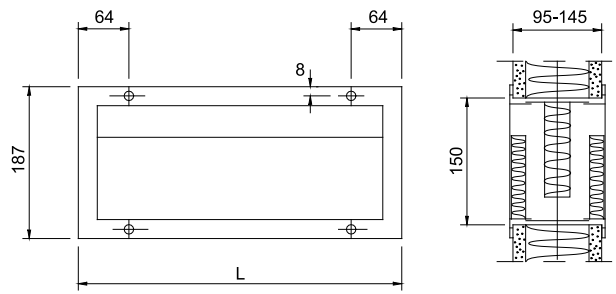
$D_1$  = Unit attenuation of SK1 (dB)

This formula is valid when the total area of the transfer air device is smaller than 15 % of the total area of the wall. The total attenuation of the wall by each frequency band is obtained also from the diagram above.

### Total attenuation of the wall



### Dimensions and weights



Size	L [mm]	Weight [kg]
400-150	437	2.0
500-150	537	2.5
600-150	637	3.0
700-150	737	3.5
800-150	837	4.0
900-150	937	4.5
1000-150	1037	5.0

### Example

SK1-600-150

- Octave band:  $f = 1000$  Hz
- Area of the wall:  $S = 10$  m<sup>2</sup>
- Attenuation of the wall:  $R = 40$  dB ( $f=1000$  Hz)
- Unit attenuation:  $D_1 = 31$  dB

$$R_p = 10 \times \log \left[ \frac{10}{10 \times 10^{-40/10} + 10^{-31/10}} \right] = 37.5 \text{ dB}$$

or from the diagram:

$$R - D_1 = (40 - 31) \text{ dB} = 9 \text{ dB}$$

$$\Rightarrow R - R_p = 2.5 \text{ dB} \Rightarrow R_p = 37.5 \text{ dB}$$

## General

### Application

SK1 is used for air transfer between rooms when sound attenuation in the air flow opening is needed.

SK1 is usually installed into the wall above a door. The low pressure drop of the device allows relatively large air transfer volumes between rooms. On the other hand, an excellent level of total sound attenuation of the wall is attained by the good silencing qualities of the device. View through the device is obstructed by the design.

The depth of the casing is adjustable to the wall thickness.

### Function

The air flow from one room to another is due to differences in pressure. Air flows through a rectangular slot on the front panel of SK1. The device functions as a silencer in an opening between rooms.

### Material and surface finish

The casing is made of hot-galvanized steel and front panels of aluminium. The sound attenuation material is mineral wool.

The front panels are painted in white (RAL 9010). Other colours are available on special order.

### Installation

The device is installed into an opening in a wall or a door. The minimum dimensions of the opening are  $B \times 150$  mm ( $B$  = nominal width of the device). The thickness of the wall can be from 95 mm to 145 mm.

### Descriptive text

Transfer air device SK1 by FläktGroup.

### Definitions

$q_v$	Air volume	l/s, m <sup>3</sup> /h
$\Delta p_t$	Total pressure drop	Pa
$L_{p10A}$	Sound pressure level with 4 dB room attenuation (10 m <sup>2</sup> sab)	dB(A)

## Product code

Transfer air device

SK1-aaaa-bbb

Nominal size, width-height (mm)  
400-150, 500-150, 600-150, 700-150,  
800-150, 900-150, 1000-150