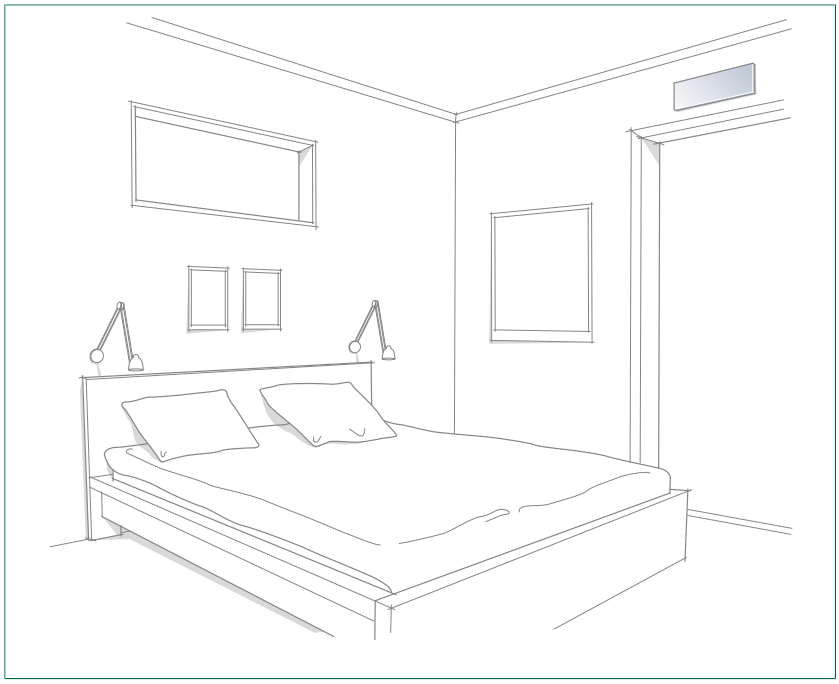
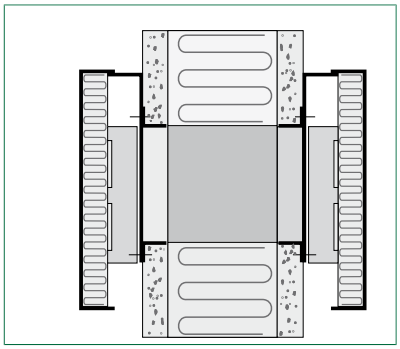
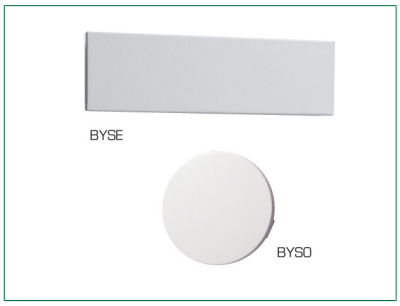
BYSE, BYSO Transfer air device







Transfer air device BYSE, BYSO is intended for positioning on a wall, and can be used in most environments. The devices provide good sound attenuation and are easy to install. They are made from hot-dip galvanized steel sheet. Visible parts are powder-coated for a high surface finish and good impact and scratch resistance.

Quick Selection

Transfer air device BYSE, BYSO

Device size	Flow at 10 Pa (l/s)	Flow at 15 Pa (l/s)
BYSO-100	16	20
BYSO-160	32	40
BYSE-300	21	25
BYSE-500	32	38
BYSE-700	44	55
BYSE-850	56	70

Specifications

- Good sound attenuation
- Easy to install

Product code example

Transfer air device BYSE-500

AIRTREND Ltd.
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11000 Beograd
Tel: 011 3836886, 3085740
Faks: 011 3444113
e-mail: gobrid@eunet.rs
web: www.airtrend.rs

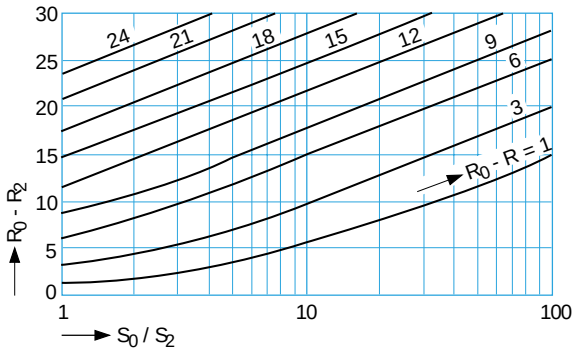
Acoustical data

Sound attenuation, transfer air device

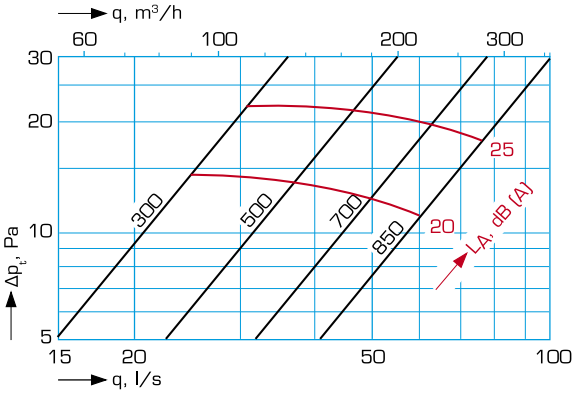
The ability of a transfer air device to provide sufficient sound attenuation is determined by calculating the reduction index for the wall including the transfer air device. Note that the door, which is usually the weakest link, must also be included in the calculation.

A quick-selection alternative is to select a transfer air device with an R_w value that is 5 dB higher than the R_w values of the door.

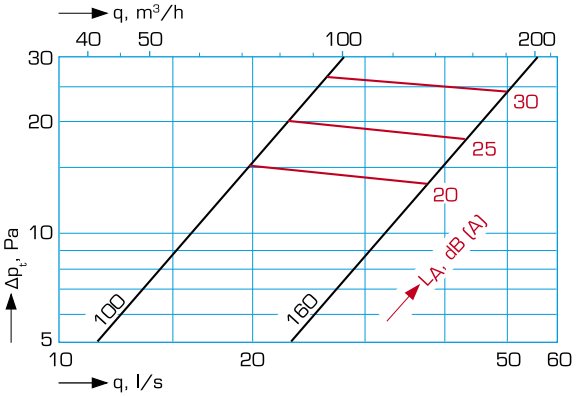
Resulting reduction index for the wall



Transfer air via transfer air device BYSE



Transfer air via transfer air device BYSO



Sound power level BYSE

Size	Correction of sound level in dB at							
	63	125	250	500	1000	2000	4000	8000 Hz
All	8	7	4	2	0	-12	-19	-19

Reduction index BYSE

Size	Reduction index R_2 in dB at						
	125	250	500	1000	2000	4000 Hz	R_w
300	31	38	46	46	53	55	46
500	30	35	43	43	55	55	43
700	30	34	42	41	56	55	42
850	29	32	39	40	57	55	40

The values are applicable for a device installed in a plaster wall with a reference surface area = 2 m^2. the reduction index falls when it is installed in a concrete wall (R_w – 10 dB)

Sound power level BYSO

Size	Correction of sound level in dB at							
	63	125	250	500	1000	2000	4000	8000 Hz
100	8	2	0	3	1	-11	-19	-21
160	13	7	5	5	-3	-13	-19	-22

Reduction index BYSO

Size	Reduction index R_2 in dB at						
	125	250	500	1000	2000	4000 Hz	R_w
100	38	37	36	42	58	58	40
160	35	34	34	41	60	60	38

The values are applicable for a device installed in a plaster wall with a reference surface area = 2 m^2. the reduction index falls when it is installed in a concrete wall (R_w – 10 dB)

Dimensioning example

A transfer air device, positioned in a wall with a surface area of 15 m^2, must be dimensioned. The reduction index of the wall is stated by the wall manufacturer, although in this example it can be found from the following table:

Reduction index R_0 in dB for actual wall at						
125	250	500	1000	2000	4000 Hz	R_w
37	44	53	56	58	58	55

Given data:

Air flow 30 l/s

Total pressure drop about 10 Pa

Calculation

1. In the graph on the previous page find BYSE-500, sound level < 20 dB(A), and total pressure drop 9 Pa.

2. The resulting reduction index R is obtained as follows:

a. Read the reduction index R_0 of the wall from the table.

b. Read the reduction index R_2 of the transfer air device from the table.

c. Calculate R_0 - R_2.

d. The surface of the wall S_0 = 15 m^2 and the transfer air device reference surface S_2 = 2 m^2, which gives a surface ratio of 7,5 (S_0/S_2). With the help of the value of R_0 - R_2, read the value of R_0 – R from the graph on page 2.

e. Subtract the value R_0 - R from R_0.

The calculation can be presented as follows:

Step	Reduction index in dB at						
	125	250	500	1000	2000	4000 Hz	R_w
a. R_0	37	44	53	56	58	58	55
b. R_2	-30	-35	-43	-43	-55	-55	
c. R_0-R_2	7	9	10	13	3	3	
d. R_0-R	2	3	4	6	1	1	
e. R	35	41	49	50	57	57	51 [1]

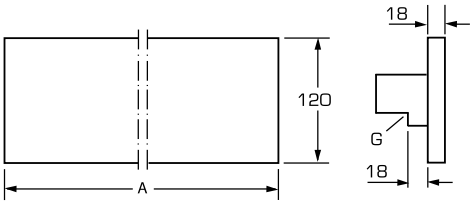
[1] Calculated according to standardized calculation procedure.

When two identical transfer air devices are positioned in the same wall, R_2 must be reduced by 3 dB before calculating R.

Dimensions and weights

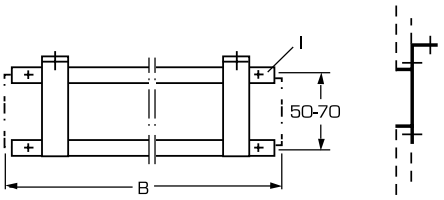
BYSE

Cover plate



G = Distance plate

Fixing plate



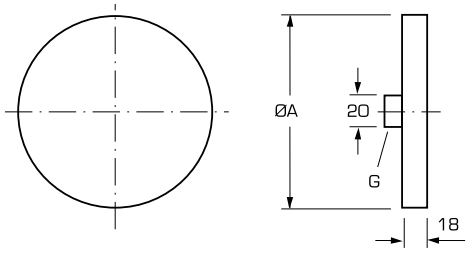
I = Fixing hole Ø5

Size	A [mm]	B [mm]	Hole [1] [mm]	Weight [kg]
300	360	300	300 x 50	1.2
500	560	500	500 x 50	1.7
700	760	700	700 x 50	2.3
850	910	850	850 x 50	2.7

[1] Tolerance + 5/– 0 mm

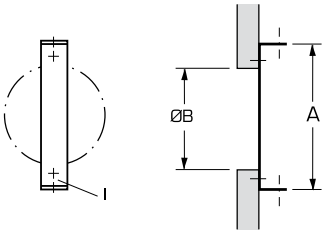
BYSO

Cover plate



G = Distance plate

Fixing plate



I = Fixing hole Ø5

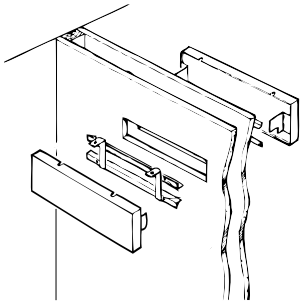
Size	A [mm]	Hole [1] [mm]	Weight [kg]
100	250	100	0.9
160	350	160	1.5

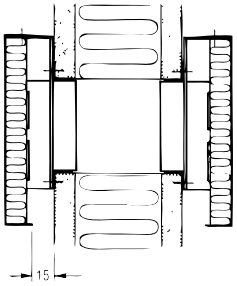
[1] Tolerance + 5/– 0 mm

Installation

BYSE

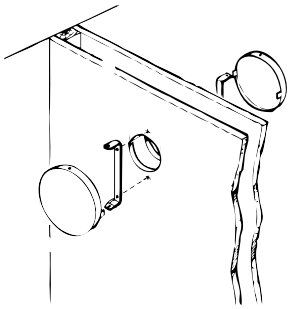
Transfer air device in studwork wall





BYSO

Transfer air device in studwork wall



General

Application

Transfer air devices BYSE, BYSO are intended for positioning in a wall, and can be used in most environments. The front panels of the device are lined internally with a sound attenuating material of the dacron type.

Material and surface finish

The devices are made of hot-dip galvanized steel sheet. Visible parts are powder-coated for a high surface finish and good impact and scratch resistance.

Standard colour is white (RAL-9010). Other colours are available on special order.

Instructions

Directions for installation, adjustment and care are set out in detail in our technical instruction which accompanies each product. The instruction is also accessible on www.flaktgroup.com.

Technical data and dimensioning

For complete dimensioning details, please see FläktGroup product selection program. Contact our nearest sales office for further information.

Descriptive text

Transfer air device BYSE/BYSO manufactured by FläktGroup.

Product code

Transfer air device	**BYSE-aaa**
Transfer air device, special colour	**BYSE-aaa-E**

Size, nominal width in mm (aaa)
300, 500, 700, 850

A BYSE includes two cover plates and two mounting frames.

Transfer air device	**BYSO-aaa**
Transfer air device, special colour	**BYSO-aaa-E**

Size, nominal width in mm (aaa)
100, 160

A BYSO includes two cover plates and two mounting frames.