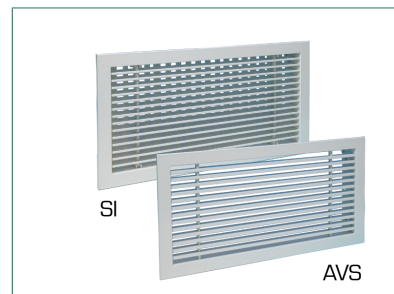


# AVS, AVSL, SI Grilles



AVS, AVSL and SI grilles are designed for use as supply air devices for e.g. in offices and commercial premises. They are also suitable for exhaust and transfer air and have adjustable spread patterns and throws. The grilles which are intended for mounting on a wall, on the floor, on a window sill or in the ceiling, can be completed with mounting frame K or connection box TG/TGE, which has a silent measurement damper. As accessory there is also adjusting device S which makes it possible to adjust the air flow.

## Specifications

- Low sound level.
- Can be mounted without mounting frame.
- Easy to adjust.

## Quick Selection

Supply air without connection box

Grill model	Air flow range l/s at sound level		
	25 dB(A)	30 dB(A)	35 dB(A)
AVS-aaaaa-100	60 - 240	70 - 295	82 - 330
AVS-aaaaa-150	110 - 330	135 - 400	150 - 460
AVS-aaaaa-200	135 - 410	160 - 500	190 - 580
AVS-aaaaa-300	260 - 520	300 - 640	360 - 760
AVS-aaaaa-400	380 - 650	450 - 790	520 - 900
AVS-aaaaa-500	500 - 810	600 - 990	700 - 1150
SI-aaaaa-100	45 - 210	50 - 250	60 - 290
SI-aaaaa-150	85 - 300	100 - 350	120 - 400
SI-aaaaa-200	110 - 380	130 - 440	150 - 510
SI-aaaaa-300	210 - 500	250 - 600	300 - 700
SI-aaaaa-400	330 - 650	400 - 750	460 - 890
SI-aaaaa-500	480 - 810	550 - 950	640 - 1150

## Product code example

Grille AVS-800-400

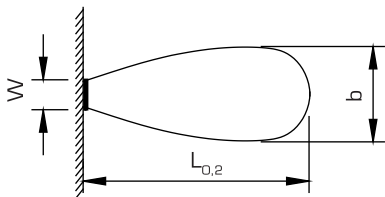
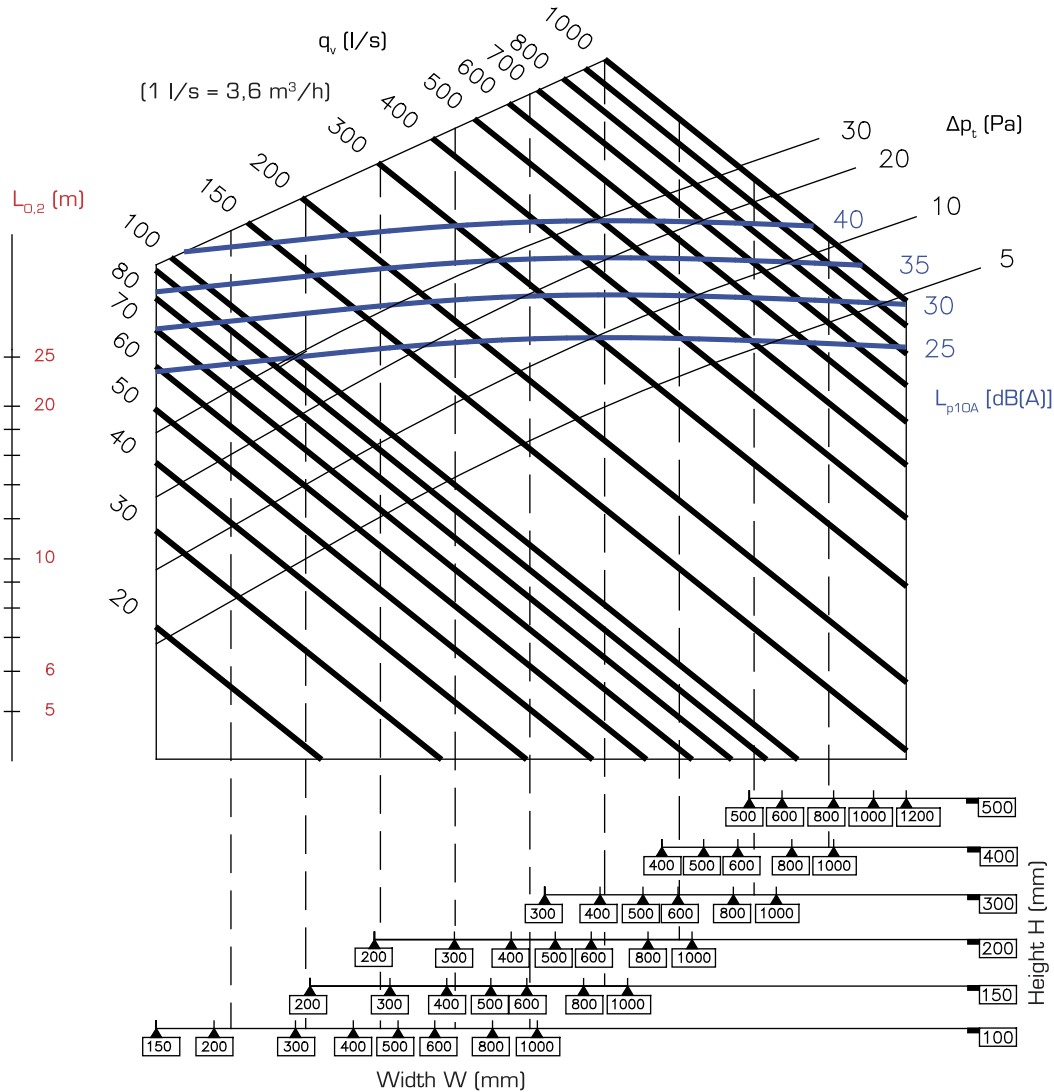
Connection box supply air  
TG-1000-100-A

Connection box exhaust air  
TGE-1000-100-B

AIRTREND Ltd.  
Predstavništvo u Beogradu  
Kumanovska 14  
11000 Beograd  
Tel: 011 3836886, 3085740  
Faks: 011 3444113  
e-mail: gobrid@eunet.rs  
web: www.airtrend.rs

## AVS Dimensioning

Air flow, pressure drop, sound level

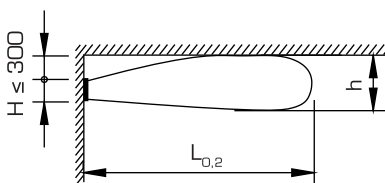


$$b \approx 0,25 \times L_{0,2}$$

$$\Delta t = 0^\circ\text{C}$$

### Exhaust air

The diagrams are valid for supply air. When used for exhaust air the sound level grows approx. 12 dB and the pressure drop falls with 10%.

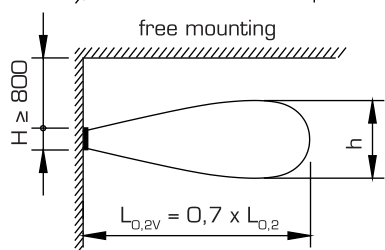


$$h \approx 0,06 \times L_{0,2}$$

$$\Delta t = 0^\circ\text{C}$$

### Supply air

When using chilled air, recommended height H is ≤ 200 mm and max chilled air Δt = approx. -5 °C.



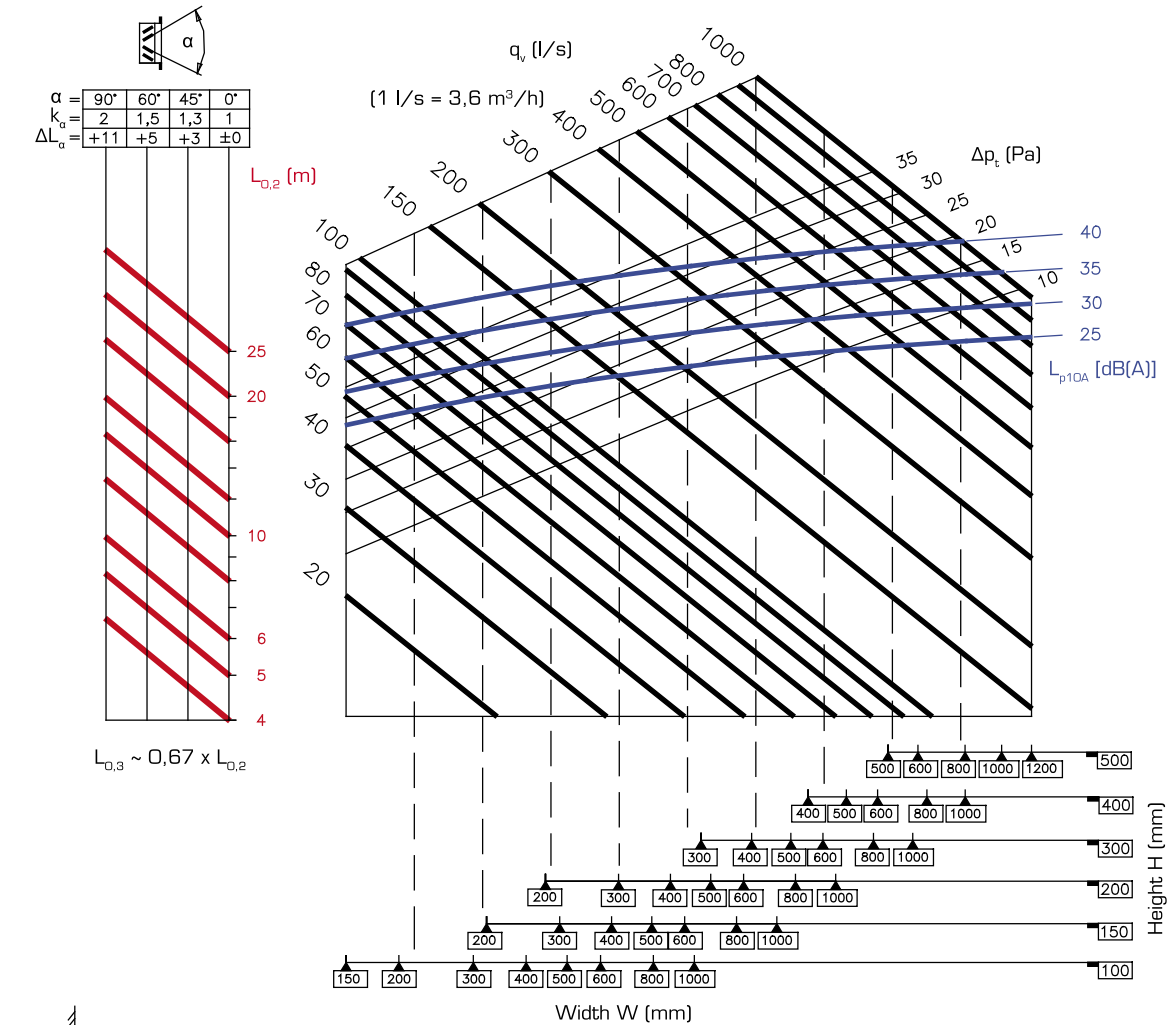
$$h \approx 0,1 \times L_{0,2}$$

$$\Delta t = 0^\circ\text{C}$$

When connection box TG or TGE is used, see acoustical and pressure data for each product

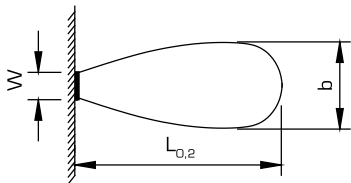
## SI Dimensioning

Air flow, pressure drop, sound level

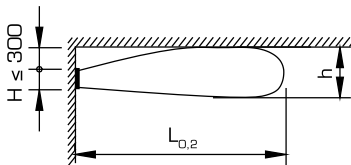


$\alpha =$	90°	60°	45°	0°
$K_\alpha =$	2	1,5	1,3	1
$\Delta L_\alpha =$	+11	+5	+3	$\pm 0$

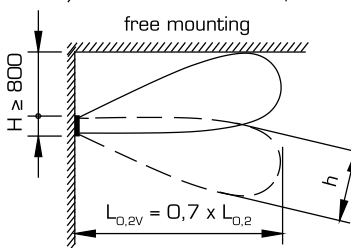
$L_{0,3} \sim 0,67 \times L_{0,2}$



$b \approx 0,25 \times L_{0,2}$	$\alpha = 0^\circ$
$0,4 \times L_{0,2}$	$45^\circ$
$0,5 \times L_{0,2}$	$60^\circ$
$0,6 \times L_{0,2}$	$90^\circ$



$h \approx 0,06 \times L_{0,2}$   
 $\Delta t = 0^\circ\text{C}$



$h \approx 0,1 \times L_{0,2}$   
 $\Delta t = 0^\circ\text{C}$

### Exhaust air

The diagrams are valid for supply air. When used for exhaust air the sound level grows approx. 5 dB and the pressure drop falls with 20%.

### Supply air

When using chilled air, recommended height  $H$  is  $\leq 200$  mm and max chilled air  $\Delta t =$  approx.  $-5^\circ\text{C}$ .

Increase in sound level and pressure drop caused by back blades:

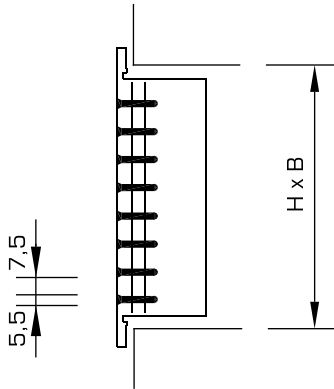
$L_{p10A[total]} = L_{p10A} + \Delta L_\alpha$

$\Delta p_{t[total]} = K_\alpha \times \Delta p_t$

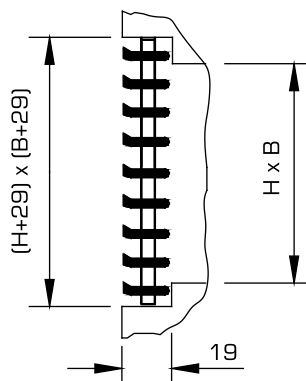
When connection box TG or TGE is used, see acoustical and pressure data for each product

### Dimensions

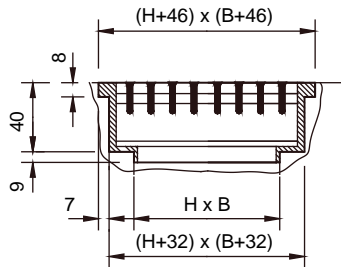
AVS



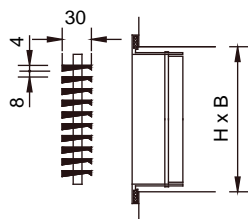
AVS1



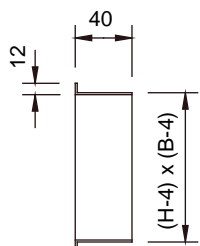
AVSL



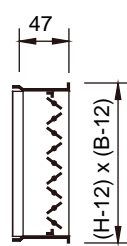
SI



Mounting frame K

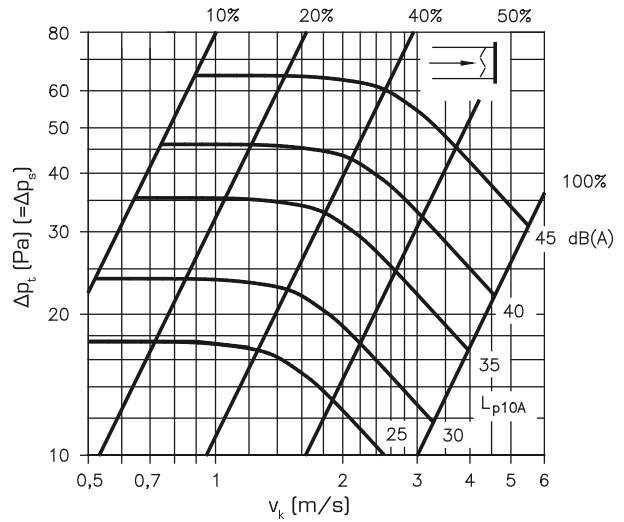


Adjusting device S



### Adjusting device S

Adjusting device S, supply air



Sound level of adjusting device

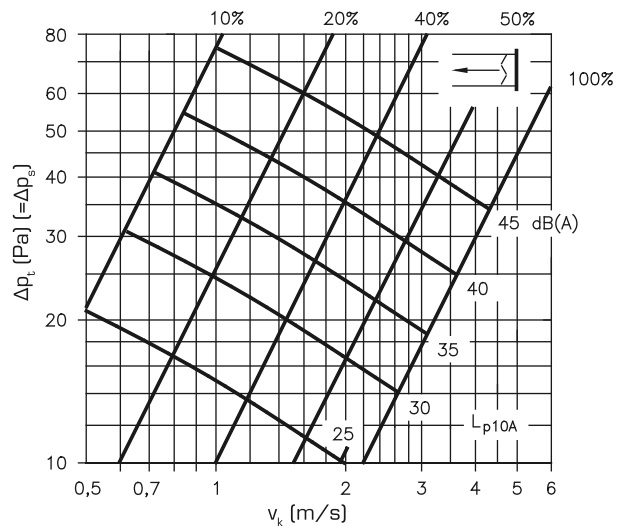
$$L_{A10s} = L_{A10} + K_A$$

Velocity of the face area:  $v_k = q_v / (W \times H)$  [(m<sup>3</sup>/s)/m<sup>2</sup>]

Influence of the face area (A<sub>k</sub>) to the sound pressure level:

A <sub>k</sub> = WxH	0,03	0,06	0,12	0,2	0,4	m <sup>2</sup>
K <sub>A</sub>	±0	+3	+8	+11	+15	dB

Adjusting device S, exhaust air



Total sound level of grille and adjusting device:

Difference of sound levels between grille and adjusting device	0 - 1	2 - 3	4 - 9	≥10	dB
Addition to the higher sound pressure level	3	2	1	0	dB

For dimensions H and W see below heading "Dimensioning" on previous page.

## General

### Construction

AVS: horizontal fixed front blades.

AVS1: front blades only without frame

AVSL: firm floor grille equipped with mounting frame, blades as in AVS (window sill use)

AVS-15, AVS1-15, AVSL-15: as above, but blades at 15° angle

SI: horizontal fixed front blades in demountable louvre assembly (flow pattern can be directed 8° or 18° angle upwards and downwards by turning the blade section) and vertical directional back blades

AVS and SI grilles, larger than width  $W > 1500$  and/or height  $H > 1000$  and AVSL grilles, larger than width  $W > 1500$  and/or height  $H > 600$  are available with modular construction. In case of modular construction the dimensions of the installation hole ( $W \times H$  in mm) should be stated. AVS grilles are available also as continuous ribbon. Max. height of the adjusting device S is 600 mm. Adjusting devices, larger than width  $W > 600$  are available with modular construction.

### Material and surface finish

The grilles are manufactured from aluminium profiles. Mounting frame K and adjusting device S are manufactured from hot galvanized sheet steel. The regulation blades are manufactured from aluminium.

AVS and SI devices are powder coated for a high surface finish and good impact and scratch resistance. To special order the AVSL is also available in colours.

Standard colour white RAL-9010. Other colours on request.

### Installation

The AVS and SI grilles are fitted into mounting frame K or connection box TG with springs or screwed directly on the wall or ceiling. If the grille is screwed on the ceiling, this should be stated in the order.

The springs are ready in all sizes, screw holes in sizes  $W > 600$  mm or  $H > 300$  mm. If screw holes are needed for a smaller grille, this should be stated in the order.

For the installation methods of grilles AVS1 and AVSL see the dimension drawings.

Placement	AVS	AVSL	AVS1	SI
Wall, supply and exhaust	o		o	o
Ceiling, supply and exhaust	o		o	
Window sill, supply				o
Floor, supply and exhaust		o		

### Instructions

Instructions for installation, adjustment and maintenance are described in detail in our technical instructions also available on the Internet at [www.flaktgroup.com](http://www.flaktgroup.com).

## Technical data

For complete dimensioning, please see FläktGroup product selection program. This is applicable especially when connection box TG/TGE is in use because device and box is not accounted for in the catalogue material.

Contact our nearest sales office for further information.

## Descriptive text

Grille e.g. AVS in size 500 x 100 mm manufactured by FläktGroup.

**Product code**

**Grille**  
(supply, exhaust, transfer air)

SI-aaaa-bbb  
 AVS-aaaa-bbb  
 AVS-aaaa-bbb-15  
 AVS1-aaaa-bbb  
 AVS1-aaaa-bbb-15  
 AVSL-aaaa-bbb  
 AVSL-aaaa-bbb-15

Width, mm (aaaa)  
 Height, mm (bbb)  
 Blades at 15° angle (15)

**Grille with mounting frame**

SI-aaaa-bbb-K  
 AVS-aaaa-bbb-K  
 AVS-aaaa-bbb-15-K

Width, mm (aaaa)  
 Height, mm (bbb)  
 Mounting frame installed (K)

**Accessories**

**Connection box supply air**

TG-aaaa-bbb-c

**Connection box exhaust air**

TGE-aaaa-bbb-c

Length of grille connection, mm (aaaa)

Height of grille connection, mm (bbb)

Connection alternative (c)

A = from the side

B = from the rear

C = from above / from below

**Mounting frame**

K-aaaa-bbb

**Adjusting frame**

S-aaaa-bbb

Width of grille in mm (aaaa)

Height of grille in mm (bbb)