

Rectangular extract or transfer air grille with clips

E5



Description and function

The E5 rectangular grille has a free cross-section of 91-92% depending on the size of the grille. The product is recommended to be used as an extract or transfer air grille.

The grille can be mounted using either clip-ons or hidden screws: Standard grilles, delivered with clip-ons for sizes up to 0.12 m², and custom orders, for sizes up to 0.2 m², can be supplied with either clip-ons or hidden screws. For ceiling installations or when used with a control damper, hidden screws are recommended. When mounted with a commissioning box, the grille can only be installed using clips without a mounting frame.

Applications

The E5 grille is best suited for comfort environments, such as offices, schools, retail stores, restaurants and hotels.

Standard sizes

See table 4 for standard dimensions.

Custom sizes: Available upon special order, up to a maximum of 2000 x 2000 mm (W x H).

Airflow range

The E5 grille supports an airflow range of 80 - 4,000 m³/h (20 - 1,200 l/s). For detailed performance data, refer to the provided diagrams.

Materials

The E5 grille features an aluminum frame with an aluminum grille insert, powder-coated in white RAL 9003 color.

Main characteristics

- Large free area - 92%
- Suitable for both ceiling and wall installations
- Mounting options include clip-ons or hidden screws
- Easily cleanable design
- Customization: Available in sizes up to 2000 x 2000 mm (W x H) for special orders

Optional accessories

- The E5 grille can be supplied with the FLKR commissioning box, made from galvanized sheet steel with sound-absorbing insulation. The commissioning box is available with side (S), or back (B) connections in standard versions. (The use of a commissioning box is recommended over 30 Pa pressure drop)
- Mounting frame: type RAM
- Control damper: type S

Technical data

The throw lengths are measured at 8°C Δt (temperature difference between the supplied and the room air) and 2,7 m room height. The throw length values can be read off of diagrams 1. and 2.

The sound level is applicable at an equivalent sound absorption area of 10 m².

Sound effect level: L_W [dB]

Sound level: L_{PA} [dB(A)] (see diagram 1.)

Correction factor: K_{OK} [dB] from table 1.

$$L_W = L_{PA} + K_{OK}$$

Free area A_f

Calculated with the help of the following equation:

$$A_f = B \times H \times k \text{ where}$$

A_f = free area [m²]

B = nominal width [mm]

H = nominal height [mm]

k = Correction factor according to table 3.

Example: E5 600 x 150 $A_f = 0,6 \times 0,15 \times 0,60 = 0,054 \text{ m}^2$

T.1. Correction K_{OK} [dB]

Medium frequency [Hz]						
63	125	250	500	1000	2000	4000
+14	+6	+5	+1	-2	-6	-15

Tolerance ±2 dB

T.2. Sound attenuation ΔL_D [dB]

Nominal height	Medium frequency [Hz]			
	125	250	500	1000
100	8	4	2	1
150	7	3	1	0
200	6	2	0	0

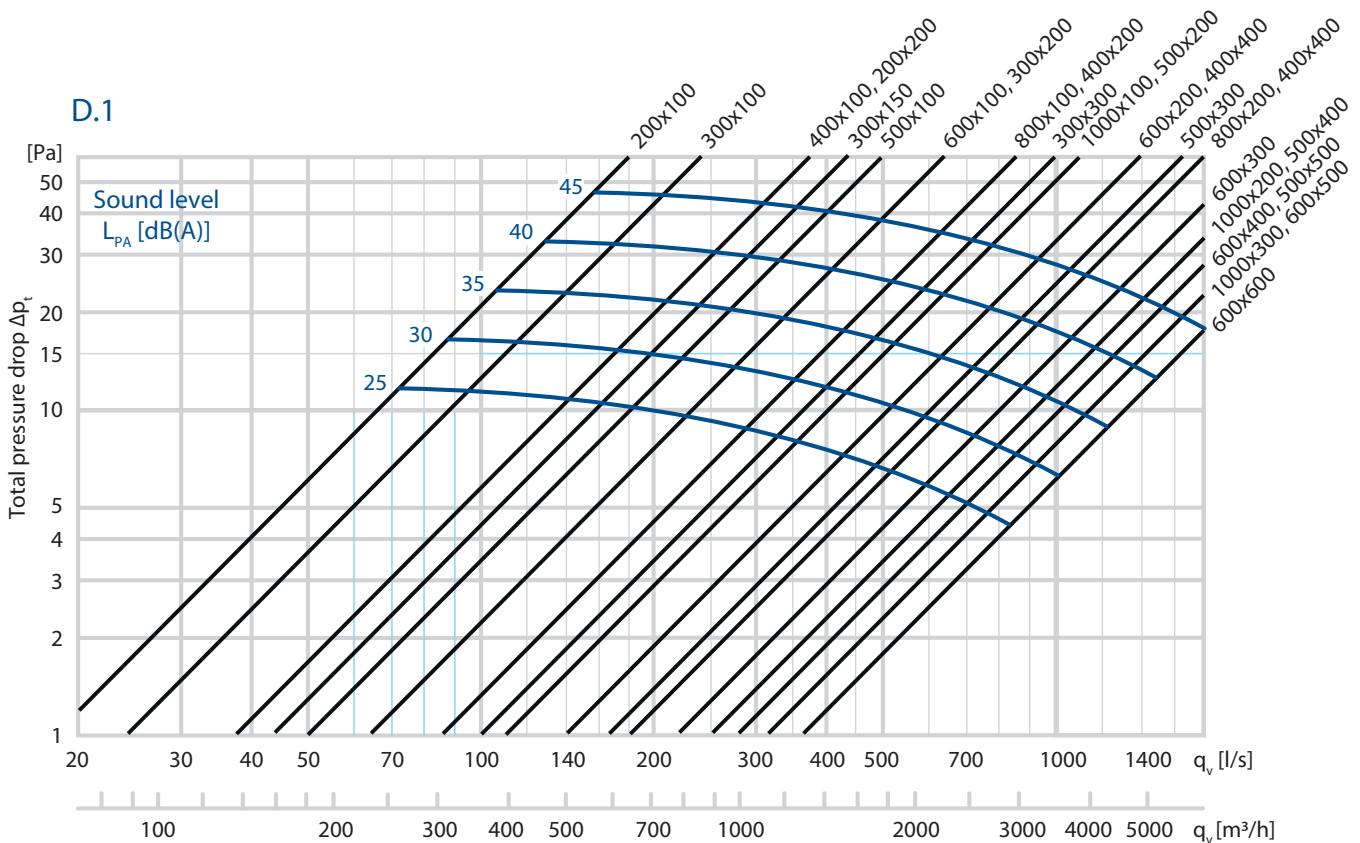
Tolerance ±3 dB

T.3. Correction factor

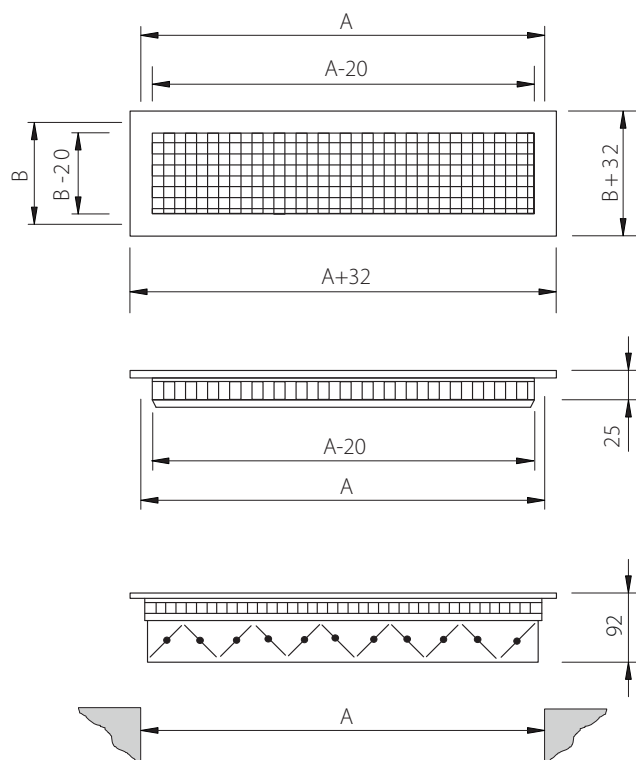
Nominal height H	Correction factor k
100	0,70
150	0,75
200	0,80
300	0,85

Diagram

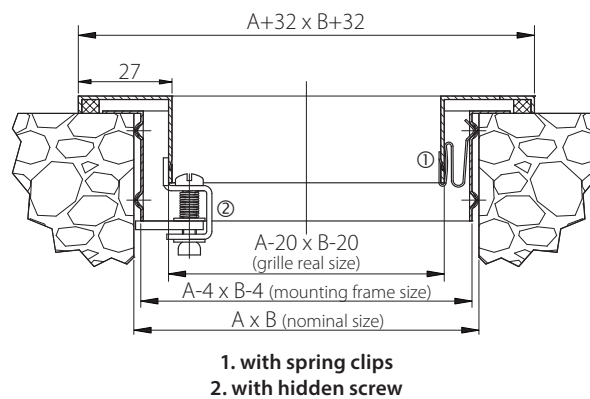
D.1



Dimensions



Installation of the grille



T.4.

B \ A	Standard sizes [mm]											
	200	300	400	500	600	700	800	900	1000	1100	1200	↔ 2000
100	•	•	•	•	•	•	•	•	•	•	•	
150	•	•	•	•	•	•	•	•	•	•	•	
200	•	•	•	•	•	•	•	•	•	•	•	
300	•	•	•	•	•	•	•	•	•	•	•	
400	•	•	•	•	•	•	•	•	•	•	•	
500	•	•	•	•	•	•	•	•	•	•	•	
600	•	•	•	•	•	•	•	•	•	•	•	
700	•	•	•	•	•	•	•	•	•	•	•	
800	•	•	•	•	•	•	•	•	•	•	•	
900	•	•	•	•	•	•	•	•	•	•	•	
1000	•	•	•	•	•	•	•	•	•	•	•	
1100	•	•	•	•	•	•	•	•	•	•	•	
1200	•	•	•	•	•	•	•	•	•	•	•	
↕ 2000												

•	standard sizes
•	standard sizes kept on stock
	In case of custom-orders sizes A and B are available up to 2000 mm, but has to be divisible by 5.

Specification

E5 air grille

Ordering code:	E5	-XXXX	-XXX	-X	+X
Product acronym:	E5				
Nominal size A:		200			
		300			
		400			
		500			
		600			
		700			
		800			
		900			
		1000			
		1100			
		1200			
Nominal size B:			100		
			150		
			200		
			300		
			400		
			500		
			600		
			700		
			800		
			900		
			1000		
			1100		
			1200		
Fixing options:					
- with spring clips				M	
- with screw				Y	
Optional accessories:					
- control damper				S	
- mounting frame				RAM	
- plenum box			for supply air	DLK	
			for extract air	FLK	
Example: E5-1000-300-M+S					

When ordering the plenum box, information on the required size is needed.

Specification

Plenum box

Ordering code:	DLK/FLK	X	-XXX-XXX
Product acronym:	DLK/FLK		
Side of connection:			
- back		B	
- side		S	
- top		O	
Size of the plenum box:			200-100
			300-100
			400-100
			500-100
			600-100
			300-150
			400-150
			500-150
			600-150
			400-200
			500-200
			600-200
Example: DLKB-200-100			