

Circular egg crate grille for extract or transfer air

## E50



### Description

- Circular egg crate grille for extract or transfer air, suitable for most types of premises.
- For transfer air installation, please see separate product sheet, **E50-TA**.
- Grille from thin aluminum vanes offers low pressure drops and low sound generation.
- The product is supplied without screw holes in the frame.
- The product is equipped with a connecting spigot, holding a rubber sealing.

### Material and finish

- Grille vanes in aluminum with a sheet steel frame, both powder coated in white RAL standard colour. The product can be supplied in alternative colours, please contact our sales for further inquiries.
- For general product specifications, see page **0:2** in our product catalog or the separate document **Product specification**, available for download from our website.

### Mounting

- The product is mounted into a circular duct.
- If required, secure the product with screws through the frame.
- For transfer air applications, the product is mounted in pairs on each side of a wall over a hole cutting in custom-purposed dimension. The grille parts are then pressed onto the hole and if required, secured with screws through the frame.

### Delivery form

- The product is supplied in single units. Transfer air applications require installation in pairs, please take this into account when ordering.

### Key features

- Circular egg crate grille for extract or transfer air
- Large proportion of free area
- Low pressure drop
- Easy mounting

### Other documentation

- Swedish operation/maintenance instruction, building product declaration (BVD) and k-factor booklet are available for download from our website, [www.klimatbyran.se](http://www.klimatbyran.se).

### T1: Quick selection

Size, nom (Ø, mm)	Air flow (l/s) [m³/h]			
	at 25 dB (A)		at 30 dB (A)	
100	25	[90]	29	[104]
125	40	[144]	46	[166]
160	68	[245]	78	[281]
200	102	[367]	116	[418]
250	155	[558]	178	[641]
315	250	[900]	285	[1026]
400	355	[1278]	405	[1458]
500	490	[1764]	565	[2034]
630	665	[2394]	775	[2790]

## Sizing Sound data

The following applies for the presented sound data:

- Sound pressure level,  $L_{PA}$  dB(A) is read from **Sizing diagrams**, where  $P_t$  (Pa) is total pressure,  $P_s$  (Pa) is static pressure and  $q$  (l/s alt. m<sup>3</sup>/h) is air flow.
- Data in table **T2** applies from duct to room.
- Correction factor,  $K_{OK}$  dB for mid-frequency in each octave band is obtained from table **T3**.
- Sound pressure level,  $L_p$  dB is calculated according to formula  $L_p = L_{PA} + K_{OK}$ .
- Free area of the grille,  $A_f$  (%) is estimated by diagram **D2**, based on the nominal size of the grille,  $\varnothing_{nom}$  (mm).
- The measurements have been made according to ISO 9614-2 and ISO 11691: 1995.

### T2: Sound attenuation

Size, nom. ( $\varnothing$ , mm)	Octave band, Hz (dB)							
	63	125	250	500	1000	2000	4000	8000
100	26	21	15	10	6	3	5	5
125	23	18	12	8	5	3	4	4
160	22	16	11	7	4	3	3	3
200	19	13	8	5	3	2	3	2
250	16	11	7	4	2	2	2	2
315	15	10	6	3	2	1	2	2
400	13	8	4	2	1	1	1	1
500	11	7	3	2	1	1	1	1
630	10	6	3	2	2	1	2	2

Tolerance  $\pm 3$  dB

### T3: Correction $K_{OK}$ dB

Size, nom. ( $\varnothing$ , mm)	Octave band, Hz (dB)							
	63	125	250	500	1000	2000	4000	8000
100	+3	-7	-9	-12	-9	-3	+1	-12
125	+8	-2	-5	+1	-1	-2	-10	-29
160	+4	-3	-4	0	-1	-2	-10	-29
200	+2	-3	-2	0	0	-2	-13	-26
250	+8	-4	-2	-2	0	-1	-14	-28
315	-1	-3	0	-1	0	-3	-12	-30
400	-1	0	+3	0	0	-4	-16	-33
500	+3	0	+3	+2	0	-6	-24	-33
630	+16	+7	+5	+3	-2	-8	-18	-31

Tolerance  $\pm 3$  dB

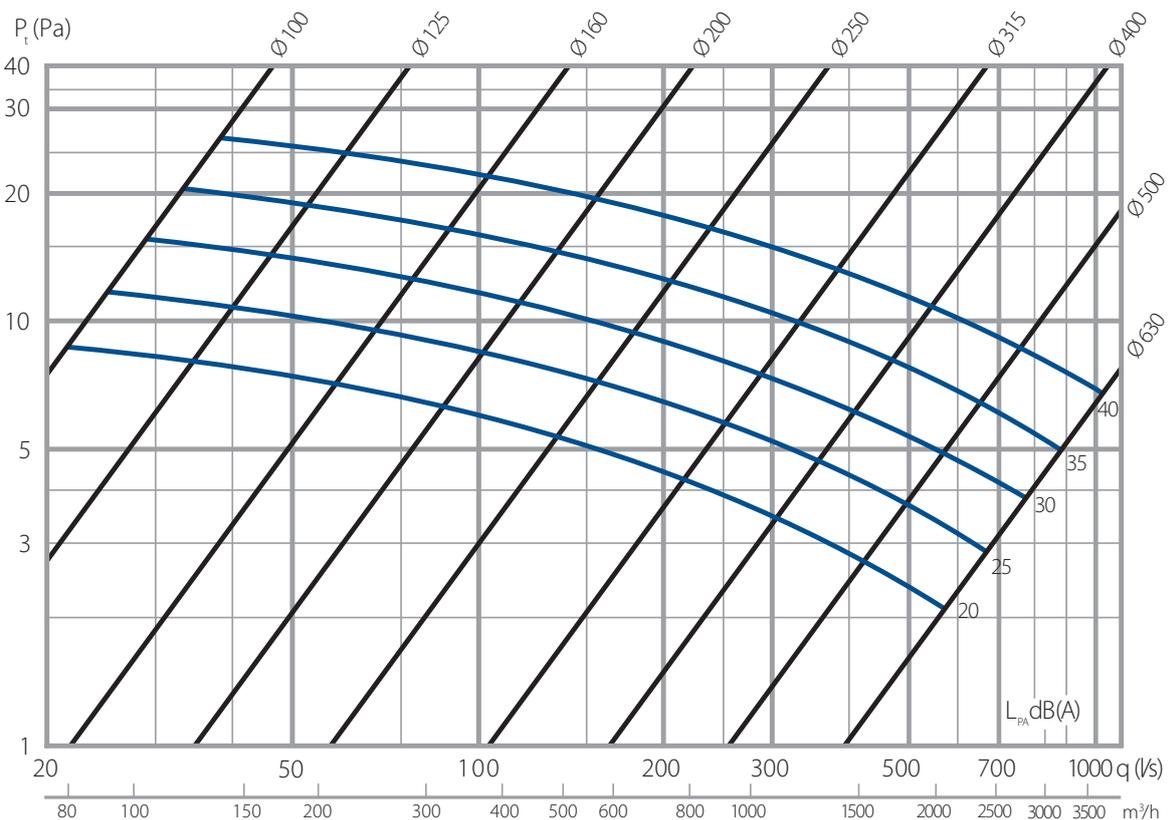
### Sizing diagrams

- Sound pressure level,  $L_{PA}$  dB(A) in diagram **D1** corresponds to A-weighted sound level in the reverberant field at an equivalent absorption area of 10 m<sup>2</sup>. This corresponds to 4 dB of attenuation in a room with a volume of 25 m<sup>3</sup> with normal acoustic absorption.
- For room types with other absorption than normal, see table **T4: Acoustic absorption for other room types**.

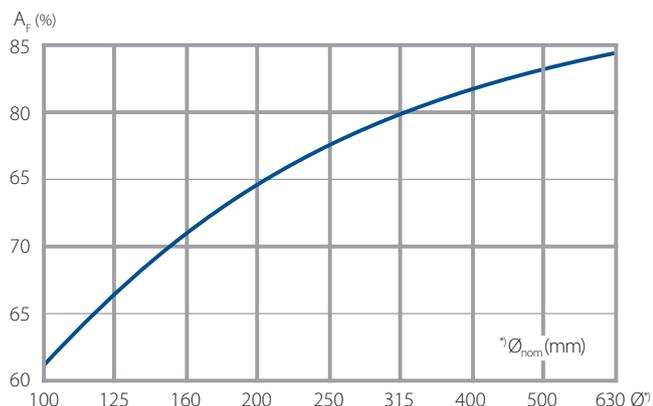
### T4: Acoustic absorption for other room types

Room volume (m <sup>3</sup> )	Room type	Correction (dB)
25	Hard room / low absorption	+2
	Absorbing room	-2
150	Hard room / low absorption	-3
	Normal absorption	-5
	Absorbing room	-7

### D1: E50 – all sizes



D2: Free area – E50



Order specification

Ordering code <sup>*)</sup>	E50 a -XXX
Product designation	E50
Product version	a
Size, Ø (mm)	100 125 160 200 250 315 400 500 630 XXX

<sup>\*)</sup>The product is supplied in single units, order in pairs for transfer air installation.

Ordering code example: E50a-315

Dimensions and weight

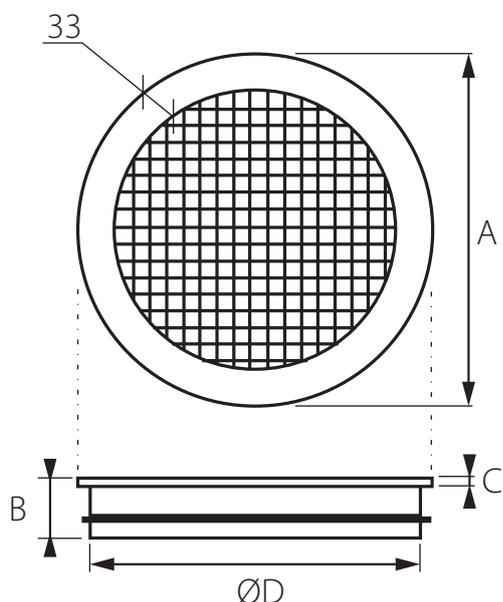


Image 1. Dimension E50 (mm).

T5: Dimensions and weight

Size, nom. (Ø, mm)	Dimensions (mm)				Weight (kg)
	ØD	A	B	C	
100	98	150	53	7	0,2
125	123	175	53	7	0,3
160	158	210	53	7	0,4
200	198	250	52	7	0,5
250	248	300	51	7	0,6
315	313	365	54	7	0,8
400	398	450	62	7	1,2
500	498	550	62	7	1,7
630	628	680	68	2	2,8

Hole cutting dimension = Nominal dimension + 5 mm.