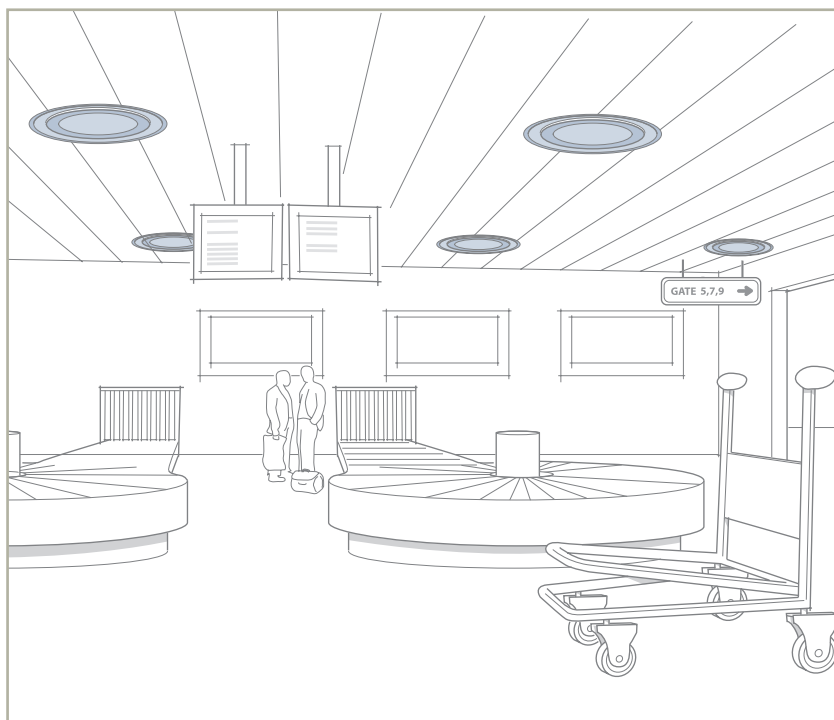


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Ceiling diffuser
KHLA
TECHNICAL DATA





Supply plate diffuser KHLA is recommended to be used either in commercial application buildings such as shops or industrial buildings with a large room volume and high ceiling interiors, for example warehouses.

It has a 360° diffusion pattern, and it can be installed as freely suspended or in a false ceiling. The air direction is adjustable and can be either horizontal or vertical.

QUICK SELECTION

Horizontal diffusion pattern

Size	Diffuser connection, mm	Airflow (l/s) when sound level is		
		25dB(A)	30dB(A)	35dB(A)
KHLA-12	125	51	60	69
KHLA-16	160	90	104	119
KHLA-20	200	149	167	193
KHLA-25	250	233	275	300
KHLA-31	315	382	417	480
KHLA-40	400	603	700	790

Vertical diffusion pattern

Size	Diffuser connection, mm	Airflow (l/s) when sound level is		
		25dB(A)	30dB(A)	35dB(A)
KHLA-12	125	41	48	58
KHLA-16	160	59	70	83
KHLA-20	200	79	93	109
KHLA-25	250	98	116	138
KHLA-31	315	118	140	167
KHLA-40	399	138	165	193

SPECIFICATIONS

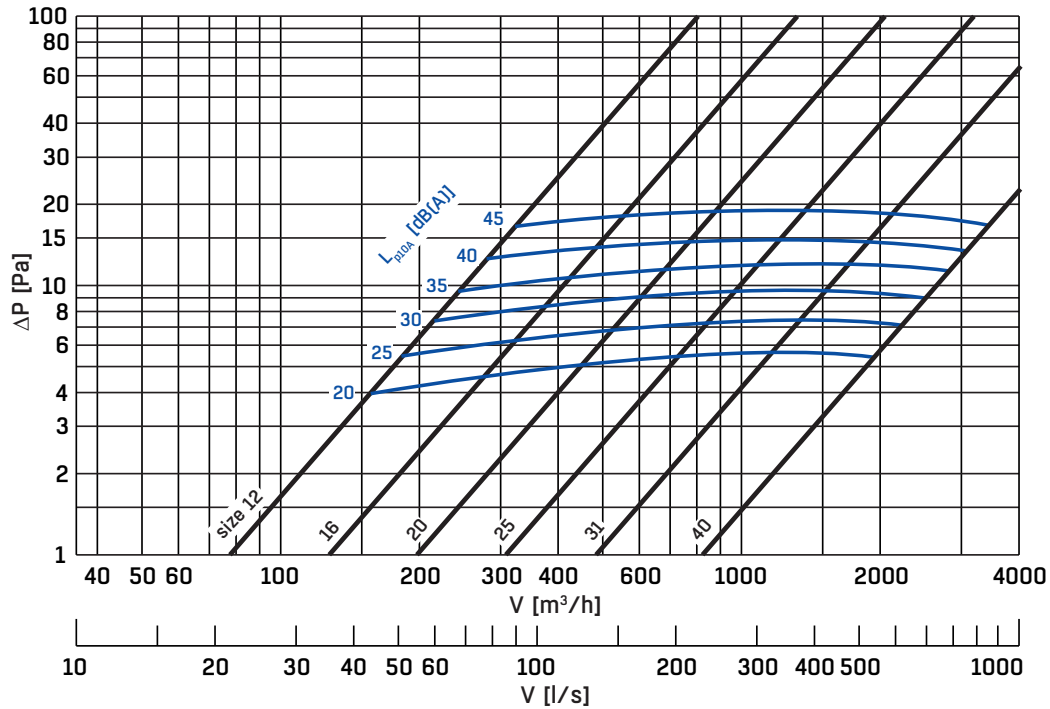
- Available in 6 sizes, connections from 125 to 400mm
- Adjustable diffusion pattern
- Intended for false ceiling or freely hanging installation

PRODUCT CODE EXAMPLE

Ceiling diffuser KHLA-40-1-1
Terminal of size 40, adjustable manually, painted in RAL 9010 colour.

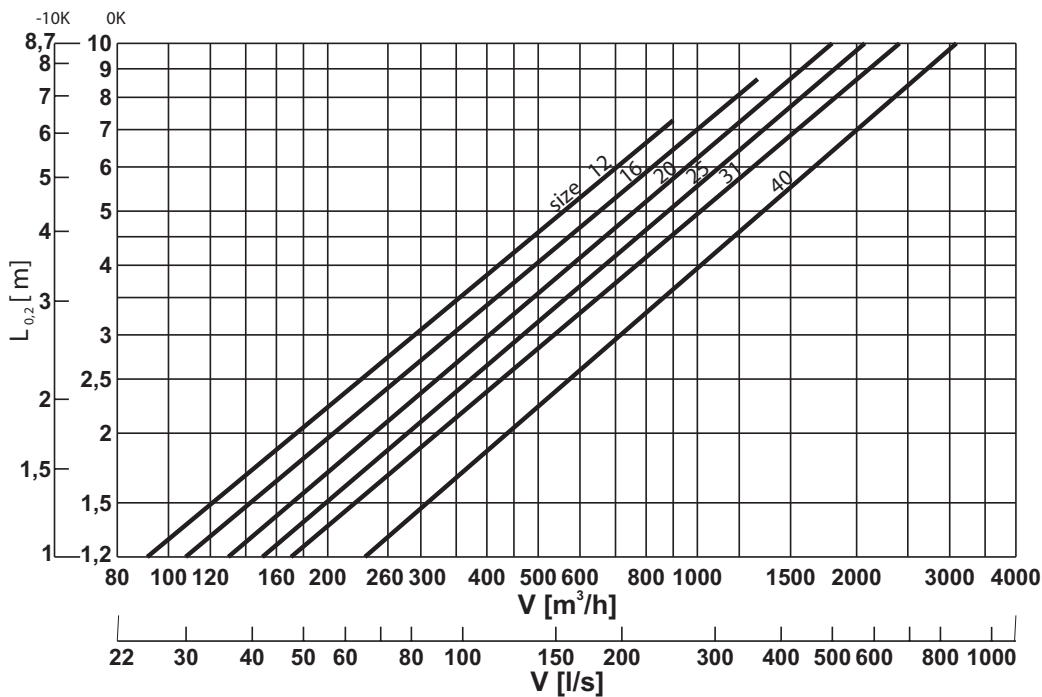
AIR FLOW, PRESSURE DROP, SOUND LEVEL, THROW LENGTH

AIR FLOW, PRESSURE DROP, SOUND LEVEL - HORIZONTAL DIFFUSION PATTERN



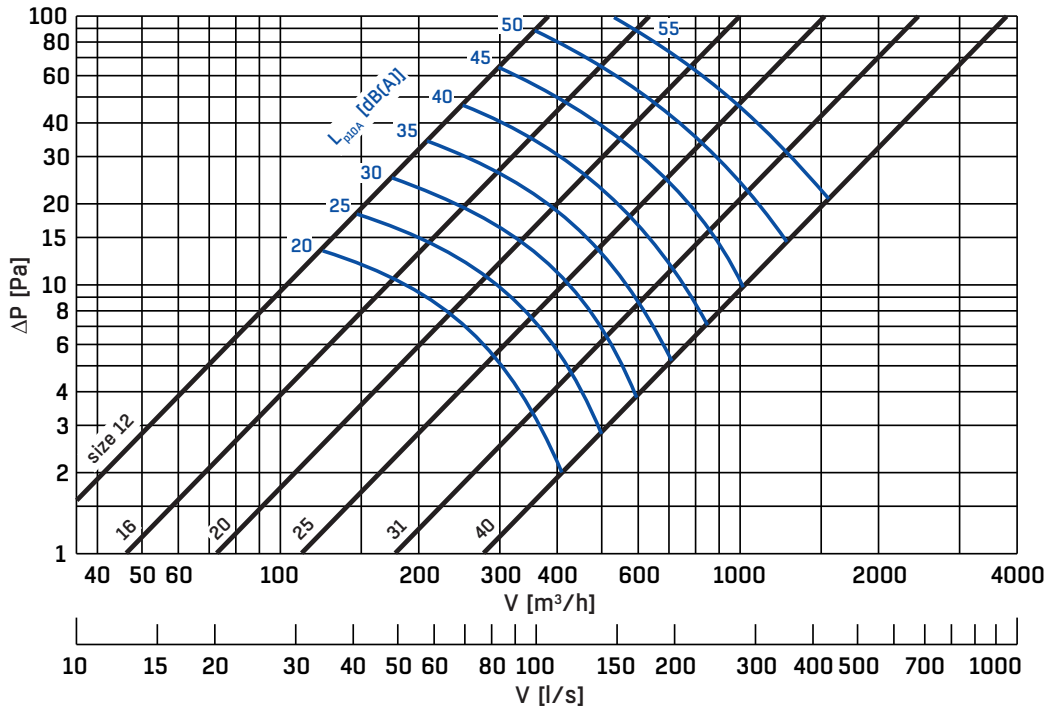
In the above graph the sound pressure levels are indicated in dB(A) for a reference room with 10 m² Sabine room absorption, equivalent to 4 dB room attenuation.

THROW LENGTH - HORIZONTAL DIFFUSION PATTERN



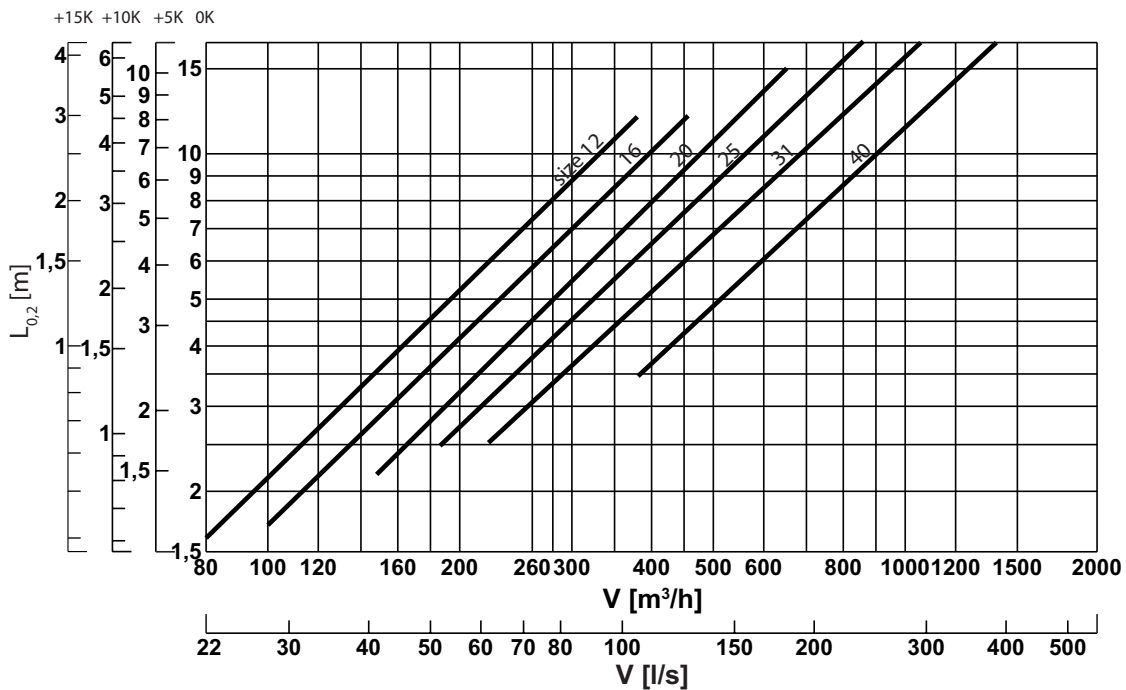
AIR FLOW, PRESSURE DROP, SOUND LEVEL, THROW LENGTH

AIR FLOW, PRESSURE DROP, SOUND LEVEL - VERTICAL DIFFUSION PATTERN



In the above graph the sound pressure levels are indicated in dB(A) for a reference room with 10 m² Sabine room absorption, equivalent to 4 dB room attenuation.

THROW LENGTH - VERTICAL DIFFUSION PATTERN



ACOUSTICAL DATA, DIMENSIONS

SOUND POWER LEVEL

Size	Correction of sound level K_{oct} in dB for octave bands, mean frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
12	10	5	7	6	-2	-7	-18	-33
16	9	4	8	6	-2	-7	-18	-32
20	10	4	6	7	-1	-13	-28	-37
25	12	7	6	7	-3	-13	-29	-36
31	12	7	7	6	-1	-10	-27	-35
40	11	6	8	7	-2	-9	-25	-35
+/-	6	3	2	2	2	2	2	3

The sound power levels for different octave bands are obtained by adding together the sound pressure level L_{p10A} in dB(A), and the corrections K_{oct} for the octave bands in the table with the help of the following formula:

$$L_{\text{W}} = L_{\text{p10A}} + K_{\text{oct}}$$

Correction K_{oct} is the mean value for the range of application of KHLA.

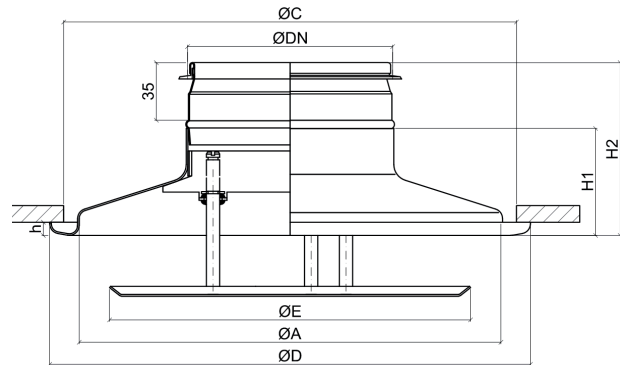
SOUND ATTENUATION

Size	Sound attenuation in ΔL dB for octave bands, mean frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
12	1	1	1	2	2	2	6	9
16	1	1	0	1	3	2	6	9
20	1	1	0	1	3	5	7	8
25	1	0	0	1	3	5	7	8
31	1	0	0	1	3	5	6	9
40	0	0	0	1	3	5	6	9
+/-	6	3	2	2	2	2	2	3

DEFINITIONS

q	air flow	$\text{l/s, m}^3/\text{h}$
Δp_{t}	total pressure drop	Pa
L_{D2}	throw	m
L_{p10A}	sound pressure level with a room attenuation of 4 dB (10 m ² room absorption area)	dB(A)
L_{W}	sound power level	dB
K_{oct}	octave band correction	dB
ΔL	sound attenuation from the duct to the room	dB

DIMENSIONS AND WEIGHT



Size	ØDN (mm)	ØA (mm)	ØD (mm)	ØC (mm)	ØE (mm)	H ₁ (mm)	H ₂ (mm)	h (mm)	Weight (kg)
12	124	259	293	269	220	65	105	8	1,4
16	159	312	346	322	256	73	113	8	1,8
20	199	414	448	424	350	85	125	10	2,5
25	249	523	559	533	440	94	139	10	2,9
31	314	617	662	627	504	121	161	14	4,6
40	399	833	889	843	700	141	201	14	8,9

GENERAL, PRODUCT CODE

CONSTRUCTION AND FUNCTION

The KHLA air diffuser is suitable for use as a supply air terminal device in commercial and industrial application buildings. It has a 360° diffusion pattern, and it can be used both freely suspended and installed in a false ceiling.

Due to movable central plate, air direction is adjustable and can be either horizontal or vertical.

MATERIAL AND SURFACE FINISH

Diffuser is made from steel sheet, powder-coated for a high surface finish. The standard colour is RAL 9010, 30% of gloss.

INSTALLATION, ADJUSTMENT AND MAINTENANCE

The instructions for installation, adjustment and maintenance are available at www.flaktgroup.com

TECHNICAL DATA AND DIMENSIONING

For complete design details, please see the Fläktgroup product selection program SELECT. The program can be found on the Internet at www.flaktgroup.com.

SPECIFICATIONS TEXT EXAMPLE

The KHLA is a ceiling supply air unit that consists of external ring and internal adjustable plate, which position can be set due to actual demand in terms of diffusion pattern shape.

PRODUCT CODE

Ceiling diffuser

KHLA-aa-b-c

Size (aa)

12, 16, 20, 25, 31, 40

Regulation (b)

1 = manual

Colour (c)

1 = standard RAL 9010

X = any other colour from RAL palette

EXCELLENCE IN SOLUTIONS

FläktGroup is the European market leader for smart and energy efficient Indoor Air and Critical Air solutions to support every application area. We offer our customers innovative technologies, high quality and outstanding performance supported by more than a century of accumulated industry experience. The widest product range in the market, and strong market presence in 65 countries worldwide, guarantee that we are always by your side, ready to deliver Excellence in Solutions.

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