

Rectangular diffusers



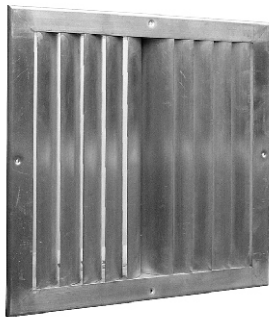
ALK



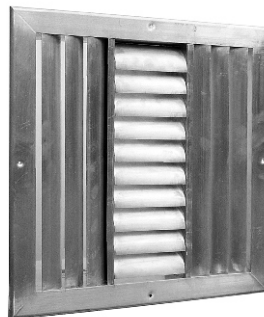
Ceiling diffusers ALK are intended to use in low- and medium-pressure ventilation systems. These diffusers allow for obtaining the 1-, 2-, 3-, or 4-way air supply.

◀ **Diffuser ALK1**
1-way air supply direction

Diffuser ALK2 ▼
2-ways air supply direction



Diffuser ALK3 ▼
3-ways air supply direction



Diffuser ALK4 ▼
4-ways air supply direction



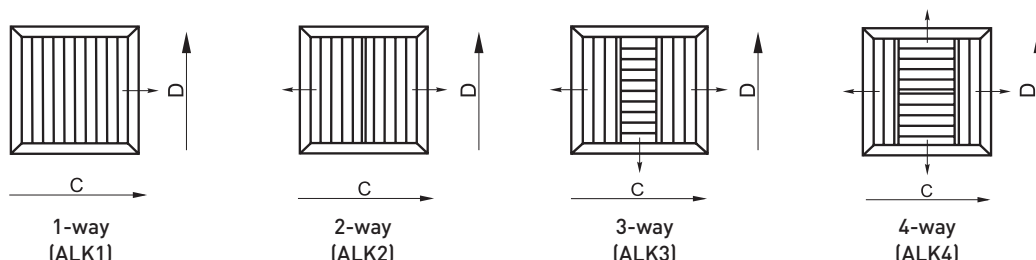
Rectangular diffusers ALK



Material and finish

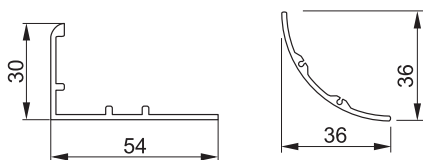
ALK are made of aluminum anodized on natural color or powder coated to white RAL 9010. Powder coating to different RAL color is possible on request. The diffusers are available with blades adjusted in 1-, 2-, 3-, or 4-way air supply.

Air supply direction



Frame and blades design

Frames and blades of the diffusers are shown in the drawing below.



Installation method

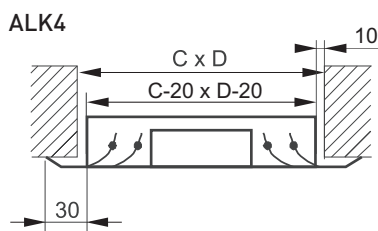
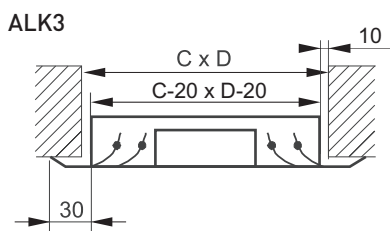
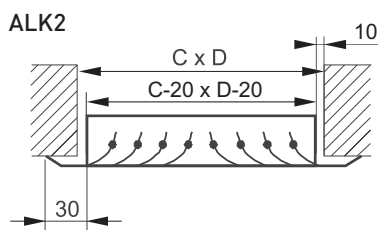
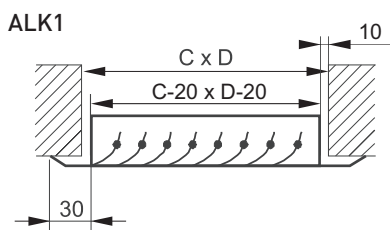
Diffusers may be installed to a compartment with use of:

- Screws, through the openings in the diffuser frame
- clips, invisible from the outside
- + installation frame or plenum box

Note: For installation in the ceiling it is recommended using of screws through the diffuser frame.

Dimensions

Connection fitting of the plenum box is normally placed on the side D.



Diffusers ALK: dimensions, effective areas, weight



ALK1 ALK2

C	D	ALK1 ALK2	
		A _{eff}	weight
[mm]	[mm]	m ²	kg
125	125	0,009	0,31
225	125	0,017	0,50
325	125	0,025	0,69
425	125	0,032	0,87
525	125	0,040	1,06
625	125	0,048	1,25
825	125	0,064	1,62
1025	125	0,080	2,00
1225	125	0,095	2,37
225	225	0,033	0,77
325	225	0,048	1,08
425	225	0,063	1,38
525	225	0,075	1,68
625	225	0,091	1,98
825	225	0,123	2,58
1025	225	0,155	3,19
1225	225	0,186	3,79
325	325	0,071	1,46
425	325	0,094	1,88
525	325	0,111	2,30
625	325	0,134	2,71
825	325	0,181	3,55
1025	325	0,228	4,38
1225	325	0,275	5,21
425	425	0,125	2,38
525	425	0,147	2,92
625	425	0,178	3,45
825	425	0,239	4,51
1025	425	0,301	5,57
1225	425	0,363	6,67
525	525	0,182	3,53
625	525	0,218	4,18
825	525	0,297	5,47
1025	525	0,360	6,77
1225	525	0,432	8,06
625	625	0,264	4,91
825	625	0,350	6,44
1025	625	0,436	7,96
1225	625	0,523	9,48

ALK3 ALK4

C	D	ALK3 ALK4	
		A _{eff}	weight
[mm]	[mm]	m ²	kg
325	325	0,071	1,53
425	325	0,094	1,95
525	325	0,111	2,36
625	325	0,134	2,78
825	325	0,181	3,60
1025	325	0,228	4,43
1225	325	0,275	5,26
425	425	0,125	2,48
525	425	0,147	3,01
625	425	0,178	3,53
825	425	0,239	4,59
1025	425	0,301	5,65
1225	425	0,363	6,71
525	525	0,182	3,65
625	525	0,218	4,29
825	525	0,297	5,58
1025	525	0,360	6,87
1225	525	0,432	8,16
625	625	0,264	5,05
825	625	0,350	6,57
1025	625	0,436	8,09
1225	625	0,523	9,61

Where:

C - width of the installation opening in [mm]

D - height of the installation opening in [mm]

A_{eff} - effective area in m²

weight - weight of the device in kg

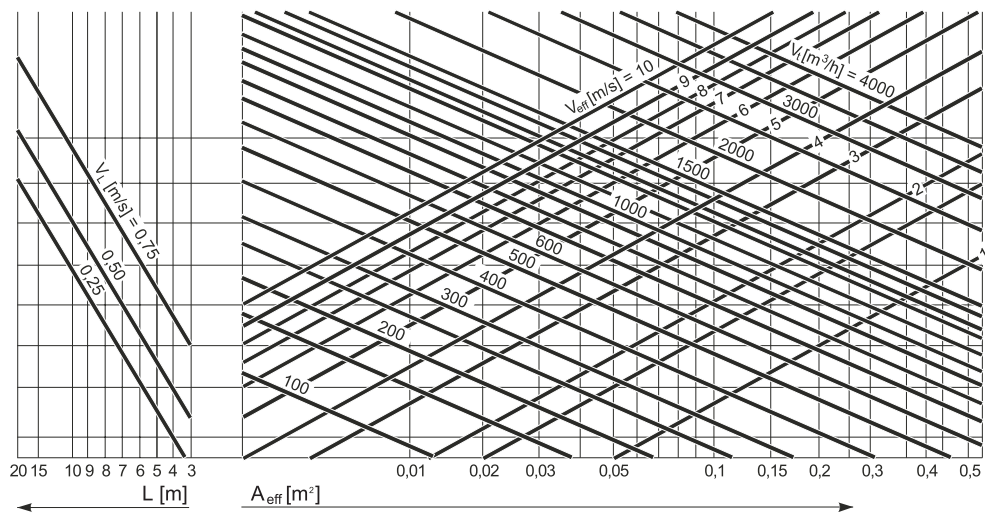
Selection of ALK

Key:

V_t [m ³ /h]	volumetric air flow
V_{eff} [m/s]	effective air flow velocity
V_L [m/s]	average air flow velocity at distance L
A_{eff} [m ²]	effective area of the diffuser
Δp [Pa]	local pressure drop
L [m]	air flow range

Nomograph I

Selection of diffuser ALK parameters



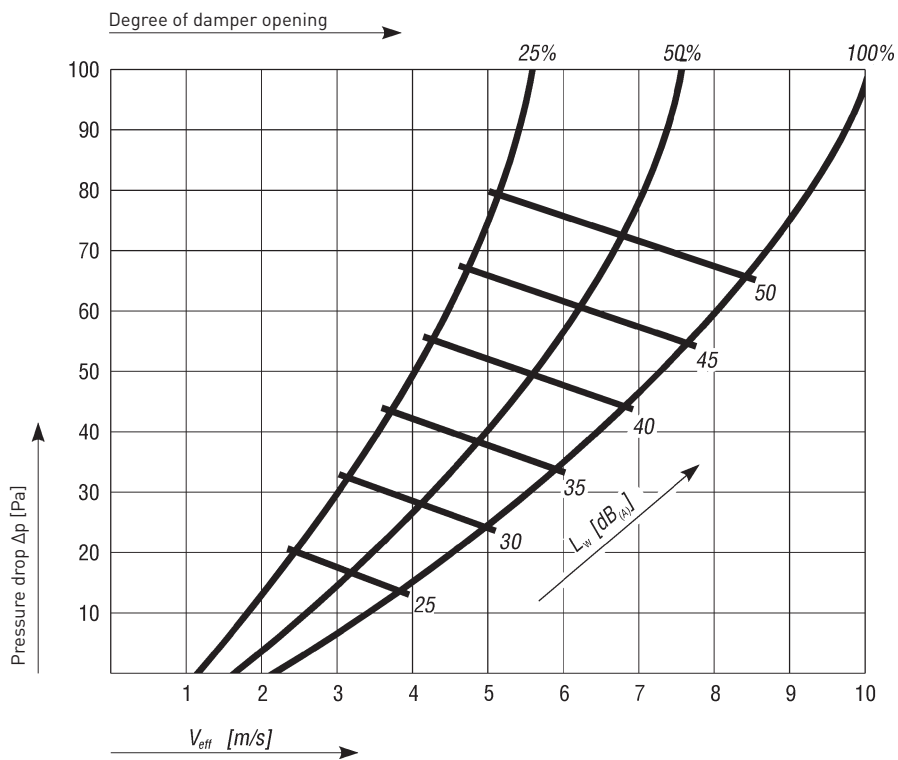
Selection ALK



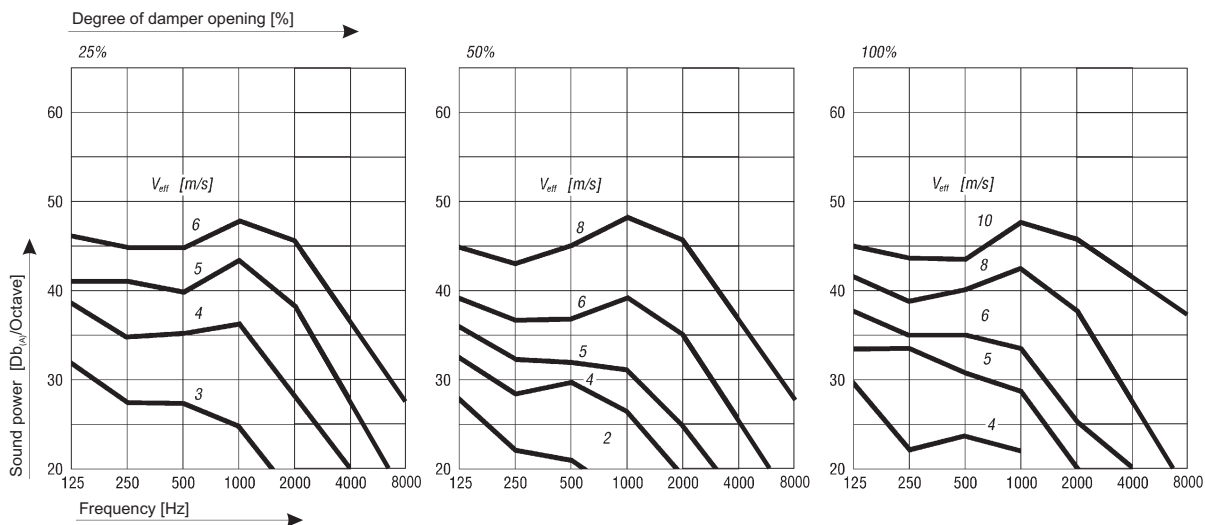
Nomograph II

The effect of velocity V_{eff} and degree of damper opening to pressure drop Δp and sound power level:

For air control dampers GS; GA



Sound power characteristics in dependence of its frequency and degree of damper opening:



Accessories and order code



While ordering, please provide the information using the following method:

<DIFFUSER TYPE> - <C>x<D> - <M> - <P><RAL> / <ADD>

Where:

- <DIFFUSER TYPE> - ALK1, ALK2, ALK3 lub ALK4
- <C> - width of the installation opening in [mm]
- <D> - length of the installation opening in [mm] (blades along the dimension D)
- <M..> - installation method: *
 - None = installation with use of screws**
 - Z= invisible clip
- <P> - finish: *
 - AA – anodized aluminum**
 - AL – powder coated aluminum
- <RAL> - RAL color (for AL finish)*
- <ADD> - Additional accessories shall be specified here, according to the list below:

Accessories**

- <GA> - Parallel blade damper made of galvanized steel
- <GS> - Opposed blade damper made of aluminum
- <RM> - installation frame
- <RM+F> - installation frame with filter

Plenum box according to the configuration as follows:

<SR><I>-<H>-<K><D><R>

- <I> - Insulation
 - None – no insulation**
 - T – insulated
- <H> - height of the plenum box in [mm]*
- <K> - connector position:
 - b = side**
 - g = top
- <D> - diameter of the connection fitting in [mm]*
- <R> - control:
 - None- no damper,**
 - P - damper with adjustment outside the plenum box

*optional values - default values will be used if optional values are not specified

** more information about accessories in grilles and diffusers accessories data sheet

Order example:

ALK1 – 625x625 – Z – AL9010 / GA, Srt – 430 – b250