

Instructions for charts for selection of ASN diffusers taking the influence of a wall and a second diffuser into account.

Q _n [m ³ /h]	Q [m ³ /s]	Type	245 x 245	x (distance from a wall)						
				1 m	2 m	3 m	4 m	5 m		
50	0,014	Δp [Pa]	0,9	L _{vertical} (Vertical range)						
		L _{v=0,25} [m]	0,9							
100	0,028	V [m/s]	0,38	0,14						
		dB	<35							
150	0,042	Δp [Pa]	3,0	0,29						
		L _{v=0,25} [m]	1,5							
200	0,056	V [m/s]	0,75	0,43	0,15					
		dB	<35							
250	0,069	Δp [Pa]	6,1	0,55	0,29					
		L _{v=0,25} [m]	2,1							
300	0,083	V [m/s]	1,13	0,68	0,41	0,11				
		dB	<35							
400	0,111	Δp [Pa]	10,2	0,91	0,65	0,30	0,05			
		L _{v=0,25} [m]	2,6							
500	0,139	V [m/s]	1,50	1,12	0,88	0,49	0,17			
		dB	<35							
600	0,167	Δp [Pa]	15,0	1,33	1,10	0,56	0,29	0,05		
		L _{v=0,25} [m]	3,0							
700	0,194	V [m/s]	1,88	1,53	1,30	0,83	0,40	0,10		
		dB	35							
800	0,222	Δp [Pa]	20,7	1,72	1,50	0,99	0,51	0,15		
		L _{v=0,25} [m]	3,5							
900	0,250	V [m/s]	2,25	1,91	1,70	1,14	0,61	0,20		
		dB	<40							
1000	0,278	Δp [Pa]	34,2	2,09	1,88	1,30	0,71	0,24		
		L _{v=0,25} [m]	4,3							
1200	0,333	V [m/s]	4,0	2,44	2,25	1,59	0,91	0,33		
		dB	40							

Note:

Chart concerns diffusers with open dampers.
Values are approximate.
Pressure loss for a single diffuser.

Δ [Pa] Pressure loss

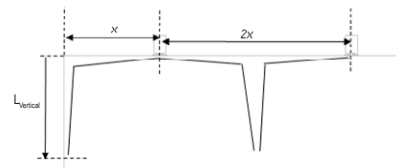
L_{v=0,25} [m] Distance along the ceiling at which the maximal air stream velocity does not exceed 0.25 m/s. Average air stream velocity ranging from 0.08-0.1 m/s

L_{vertical} [m] Vertical distance from the ceiling at which the maximal air stream velocity does not exceed 0.25 m/s. Average air stream velocity ranging from 0.08-0.1 m/s

x [m] Distance from a wall, or half a distance between diffusers

V [m/s] Maximum adhering air stream velocity at the edge of the diffuser

dB Noise



Example:

1) Single diffuser without wall influence, e.g. For Q_n = 700 m³/h it has the range of 6,6m for a stream of 0,2m/s velocity

2) Taking into account the influence of a wall 3m from the diffuser we get: Range along the ceiling - 6,6m, Vertical range along the wall is 0.83m from the ceiling (summary 3m + 83m = 3,83m)

3). Having two diffusers e.g. 6 meters from each other and looking for the stream range between them, one has to divide the distance between them by 2 (in this case it will be 3m) and read the diagram as when taking into account the influence of a wall 3m from the diffuser.

Part of the basic diagram concerning air distribution along the ceiling without taking the influence of a wall into account.

Part taking into account the influence of a wall and a second diffuser on the range.