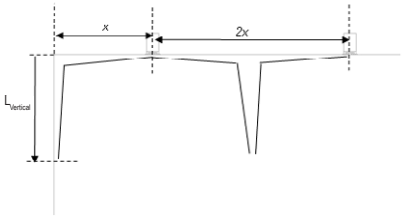
Chart for selection of ASN 412x412 diffusers taking the influence of a wall and a second diffuser into account.

Q_h [m^3/h]	Q [m^3/s]	Type	412 x 412	x (distance from a wall)				
				1 m	2 m	3 m	4 m	5 m
				$L_{Vertical}$ (Vertical range)				
100	0,028	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	0,5 0,9 0,42 <35					
150	0,042	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	1,0 1,3 0,63 <35	0,10				
200	0,056	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	1,6 1,7 0,83 <35	0,20				
250	0,069	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	2,3 2,1 1,04 <35	0,30	0,02			
300	0,083	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	3,2 2,5 1,25 <35	0,40	0,13			
400	0,111	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	5,3 3,2 1,67 <35	0,59	0,33	0,04		
500	0,139	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	7,9 3,9 2,08 35	0,78	0,52	0,20		
600	0,167	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	10,9 4,5 2,50 <40	0,96	0,71	0,35	0,08	
700	0,194	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	14,2 5,2 2,92 <40	1,13	0,89	0,49	0,18	0,01
800	0,222	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	18,0 5,8 3,33 <40	1,31	1,07	0,64	0,28	0,05
900	0,250	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	22,1 6,4 3,75 40	1,48	1,25	0,78	0,37	0,09
1000	0,278	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	26,6 7,1 4,17 <45	1,65	1,42	0,92	0,46	0,13
1200	0,333	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	36,6 8,3 5,00 <45	1,98	1,77	1,20	0,65	0,21
1400	0,389	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	47,9 9,5 5,83 45	2,30	2,10	1,47	0,83	0,29
1600	0,444	Δp [Pa] $L_{v=0,25}$ [m] V [m/s] dB	60,5 10,6 6,67 50	2,62	2,43	1,74	1,01	0,37

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



The degree of damper closure can be taken into account using the coefficient

Closing angle	Coefficient
20%	1.2
40%	1.5
60%	3.0
80%	7.0
100%	15.0

$\Delta p_{slice} \approx \Delta p$ x Coefficient
$L_{v=0,25\ slice} \approx L_{v=0,25}$ / Coefficient