

Chart for selection of ASN 357x357 diffusers taking the influence of a wall and a second diffuser into account.

| Q _h [m ³ /h] | Q [m ³ /s] | Type | 357 x 357 | x (distance from a wall) | | | | |
|------------------------------------|-----------------------|-------------------------|-----------|--|------|------|------|------|
| | | | | 1 m | 2 m | 3 m | 4 m | 5 m |
| 50 | 0,014 | Δp [Pa] | 0,3 | L _{vertical} (Vertical range) | | | | |
| | | L _{v=0,25} [m] | 0,7 | | | | | |
| | | V [m/s] | 0,26 | | | | | |
| | | dB | <35 | | | | | |
| 100 | 0,028 | Δp [Pa] | 0,9 | 0,07 | | | | |
| | | L _{v=0,25} [m] | 1,2 | | | | | |
| | | V [m/s] | 0,53 | | | | | |
| | | dB | <35 | | | | | |
| 150 | 0,042 | Δp [Pa] | 1,8 | 0,19 | | | | |
| | | L _{v=0,25} [m] | 1,7 | | | | | |
| | | V [m/s] | 0,79 | | | | | |
| | | dB | <35 | | | | | |
| 200 | 0,056 | Δp [Pa] | 3,0 | 0,31 | 0,03 | | | |
| | | L _{v=0,25} [m] | 2,1 | | | | | |
| | | V [m/s] | 1,06 | | | | | |
| | | dB | <35 | | | | | |
| 250 | 0,069 | Δp [Pa] | 4,5 | 0,42 | 0,15 | | | |
| | | L _{v=0,25} [m] | 2,5 | | | | | |
| | | V [m/s] | 1,32 | | | | | |
| | | dB | <35 | | | | | |
| 300 | 0,083 | Δp [Pa] | 6,1 | 0,52 | 0,26 | | | |
| | | L _{v=0,25} [m] | 2,9 | | | | | |
| | | V [m/s] | 1,58 | | | | | |
| | | dB | <35 | | | | | |
| 400 | 0,111 | Δp [Pa] | 10,2 | 0,72 | 0,46 | 0,15 | | |
| | | L _{v=0,25} [m] | 3,7 | | | | | |
| | | V [m/s] | 2,11 | | | | | |
| | | dB | 35 | | | | | |
| 500 | 0,139 | Δp [Pa] | 15,0 | 0,91 | 0,66 | 0,31 | 0,05 | |
| | | L _{v=0,25} [m] | 4,3 | | | | | |
| | | V [m/s] | 2,64 | | | | | |
| | | dB | <40 | | | | | |
| 600 | 0,167 | Δp [Pa] | 20,7 | 1,09 | 0,85 | 0,46 | 0,15 | |
| | | L _{v=0,25} [m] | 5,0 | | | | | |
| | | V [m/s] | 3,17 | | | | | |
| | | dB | <40 | | | | | |
| 700 | 0,194 | Δp [Pa] | 27,0 | 1,27 | 1,03 | 0,60 | 0,25 | 0,04 |
| | | L _{v=0,25} [m] | 5,7 | | | | | |
| | | V [m/s] | 3,69 | | | | | |
| | | dB | 40 | | | | | |
| 800 | 0,222 | Δp [Pa] | 34,2 | 1,43 | 1,20 | 0,74 | 0,34 | 0,08 |
| | | L _{v=0,25} [m] | 6,3 | | | | | |
| | | V [m/s] | 4,22 | | | | | |
| | | dB | <45 | | | | | |
| 900 | 0,250 | Δp [Pa] | 42,0 | 1,60 | 1,37 | 0,88 | 0,44 | 0,12 |
| | | L _{v=0,25} [m] | 6,9 | | | | | |
| | | V [m/s] | 4,75 | | | | | |
| | | dB | <45 | | | | | |
| 1000 | 0,278 | Δp [Pa] | 50,5 | 1,76 | 1,54 | 1,02 | 0,53 | 0,16 |
| | | L _{v=0,25} [m] | 7,5 | | | | | |
| | | V [m/s] | 5,28 | | | | | |
| | | dB | 45 | | | | | |
| 1200 | 0,333 | Δp [Pa] | 69,5 | 2,07 | 1,86 | 1,27 | 0,70 | 0,24 |
| | | L _{v=0,25} [m] | 8,6 | | | | | |
| | | V [m/s] | 6,33 | | | | | |
| | | dB | 50 | | | | | |
| 1400 | 0,389 | Δp [Pa] | 91,0 | 2,36 | 2,17 | 1,52 | 0,86 | 0,31 |
| | | L _{v=0,25} [m] | 9,7 | | | | | |
| | | V [m/s] | 7,39 | | | | | |
| | | dB | >50 | | | | | |

Note:

Chart concerns diffusers with open dampers.

Values are approximate.

Pressure loss for a single diffuser.

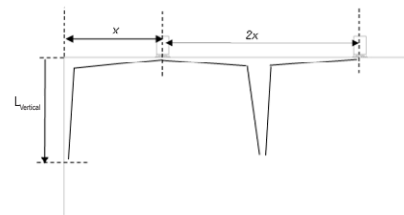
Δ [Pa] Pressure loss

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/sL_{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 |

$$\Delta p_{\text{closed}} = \Delta p \times \text{Coefficient}$$

$$L_{v=0,25 \text{ closed}} = L_{v=0,25} / \text{Coefficient}$$