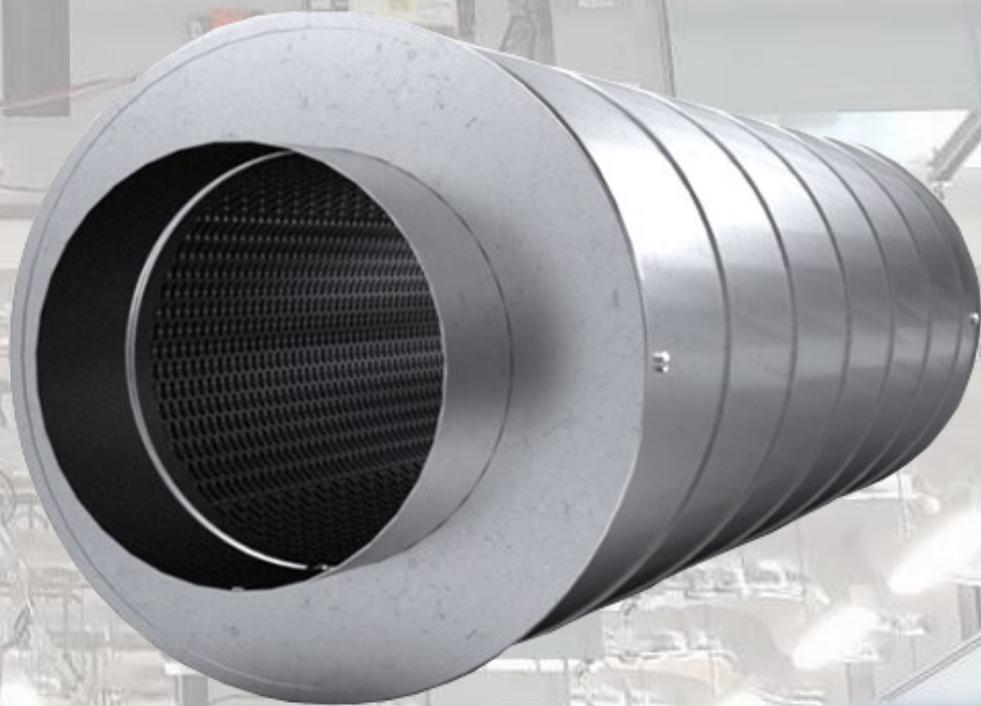


1.8.1 SAR

Circular Sound Attenuators



AirConcepts

AIRFLOW MEASUREMENT AND CONTROL

Application

The round silencers type SAR are designed for attenuating noise in ventilation systems. In systems with VAV/CAV terminals, they are usually installed after supply terminals or before the return/extract terminals to reduce the discharge noise from the VAV/CAV terminals, or other noise generated in the ventilation system, to achieve the specified sound pressure level (SPL) in the room.

Single duct VAV terminals can also be used to maintain a constant (positive or negative) room pressure and to control the carbon dioxide (CO₂) level in the room.



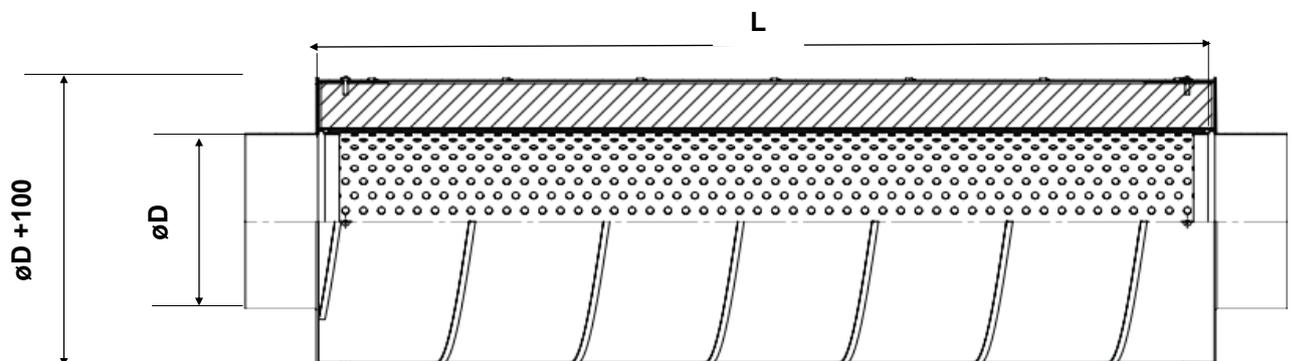
Design features

- Nominal sizes : $\varnothing 100$, 125, 160, 200, 250, 315 and 400.
- Standard length : 500 and 1000mm.
- Outer casing: Spiral wound galvanised steel construction.
- Inner casing: Perforated galvanised steel construction.
- Operating pressure : 2000Pa max.
- Spigots comply with DIN 24145 or DIN 24146.
- Leakage Class "D" EN 1751.
- Acoustical insulation: 50mm thick ,40kg/m³ mineral wool with glued woven glass fibre top layer erosion proof up to 20 m/s. fire resistant Class A1 (EN 13501) and BS-476 Class "O".
- Operating temperature +5 to 90°C.
- No maintenance required.
- Other construction available upon request.



Type SAR

Standard Dimensions



Weight standard models

Diameter D	100	125	160	200	250	315	400	mm
L=500 mm	4,2	5,1	7,2	9,2	10,8	12,8	14,8	kg
L=1000 mm	7,7	9,3	13	16,7	19,6	23,2	26,9	kg

Sound attenuation in dB per frequency band L=500mm

Diameter [mm]	Frequency [Hz]							
	63	125	250	500	1000	2000	4000	8000
100	2	4	7	14	25	22	18	15
125	1	4	7	13	23	19	15	13
160	1	3	6	12	20	15	12	10
200	1	3	6	11	17	12	10	8
250	0	2	5	10	15	9	7	6
315	0	2	5	10	12	5	4	3
400	0	1	4	9	9	2	1	1

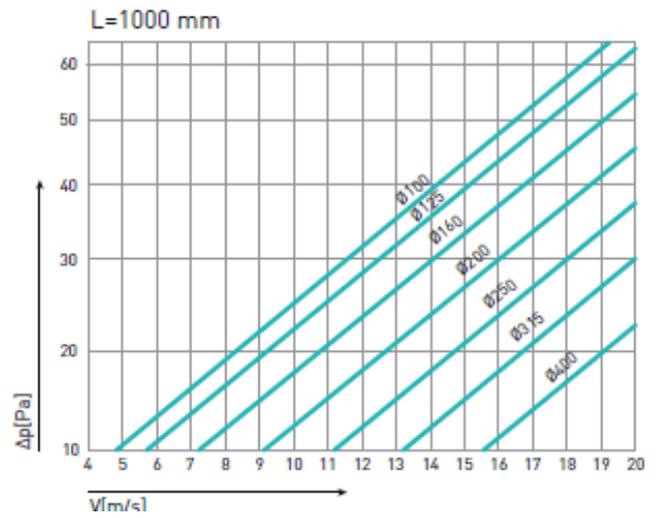
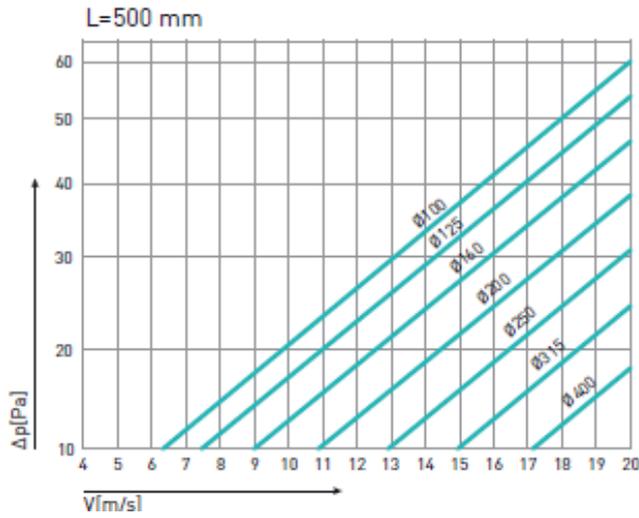
Sound attenuation in dB per frequency band L=1000mm

Diameter [mm]	Frequency [Hz]							
	63	125	250	500	1000	2000	4000	8000
100	5	8	16	30	43	47	32	24
125	3	7	15	27	39	40	27	20
160	3	6	13	25	35	33	23	16
200	2	5	11	22	31	26	18	13
250	1	4	10	20	27	19	14	10
315	1	3	8	17	23	13	9	6
400	0	2	6	14	19	6	4	2

Air generated noise Lw in dB(A)

V [m/s]	Diameter circular [mm]						
	100	125	160	200	250	315	400
5,0			4	5	8	10	13
8,0	16	17	21	22	24	26	27
10,0	23	24	27	28	31	32	34
12,0	28	30	32	34	36	38	41

Static Pressure loss in Pa



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