

Halton SA, sound attenuator- Technical description

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1 Introduction

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1.2 About this document

This technical description is intended for anyone needing detailed technical information about the product. It also provides general design-related information, such as design examples. More detailed designs can be carried out using the Halton eHIT selection tool, available at www.ehit.halton.com.

1.3 Summary of changes

Release	Date	Description
1.3	22-Dec-2025	2.1 Overview: Added "M1 cleanliness classification" text and link.
1.2	18-Feb-2025	Added new overview image and dimension images
1.1	14-May-2024	Minor visual updates
1.0	28-Feb-2024	First release

2 Product description

2.1 Overview

Halton offers high-quality circular and rectangular sound attenuators for reducing noise levels in the duct. The sound attenuators are available as an accessory with the following available options:

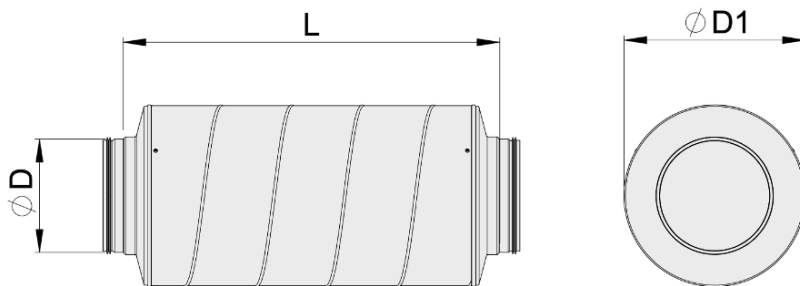
- Connection types:
 - Circular
 - Rectangular
- Lengths:
 - Circular 600, 1200 mm
 - Rectangular 1200 mm
- Insulation material options:
 - Mineral wool (MW)
 - Polyester fibre (PF)
- Class C tightness level

The model featuring polyester fiber (PF) insulation does not emit airborne particles and complies with the **M1 cleanliness classification** for ventilation products.

2.2 Dimensions and weight

Circular

Silencers made of pressed lid for $D1 = 100 \dots 250 \text{ mm}$



Silencers made from segmented lid and separate nipples NSL for $D1 > 315 \text{ mm}$

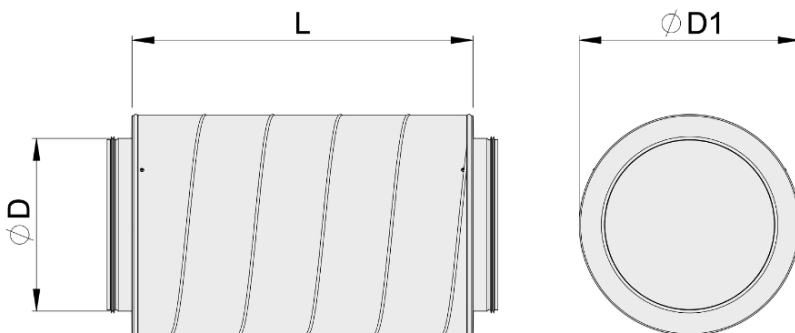


Fig. 1. Dimensions of circular sound attenuator

D1	D	L	Attenuation [dB] for frequency [Hz]							Mass
[mm]	[mm]	[mm]	125	250	500	1000	2000	4000	8000	[kg]
100	200	600	9	17	30	45	49	27	29	3
100	200	1200	15	23	35	50	54	32	34	7
125	224	600	8	15	27	41	45	24	25	4
125	224	1200	14	21	32	46	50	29	31	9
160	250	600	7	14	24	37	39	21	22	6
160	250	1200	13	19	29	42	44	26	27	10
200	315	600	6	11	20	35	35	19	20	7
200	315	1200	11	17	26	41	41	25	26	12
250	355	600	5	11	19	30	28	16	18	11
250	355	1200	11	17	25	35	34	21	23	17
315	400	600	5	8	16	25	19	14	15	12
315	400	1200	10	14	21	30	24	19	21	19
400	500	600	4	8	15	20	15	12	13	15
400	500	1200	9	14	21	25	20	17	19	25
500	600	600	3	7	14	17	11	11	12	32
500	600	1200	9	13	19	22	17	16	17	59
630	710	1200	8	12	17	20	14	14	15	42

Table 1. Values presented with attenuation material, mineral wool

Rectangular

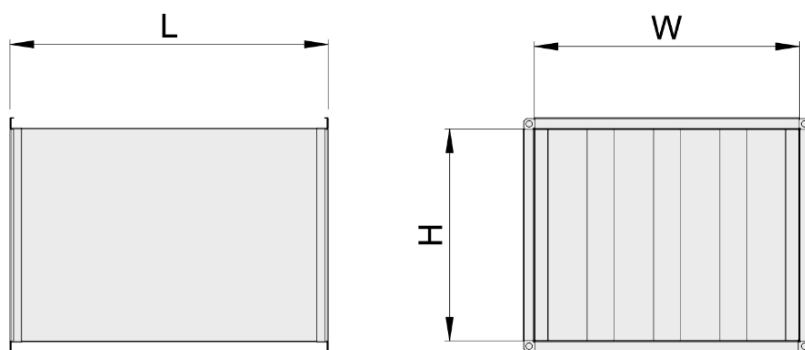


Fig. 2. Dimensions of rectangular sound attenuator

Width [W]	Height [H]	Airflow	Duct vel	Gap vel	ΔP	Mass
[mm]	[mm]	[m ³ /h]	[m/s]	[m/s]	[Pa]	[kg]
200	150	432	4	8	39	7,1

Width [W]	Height [H]	Airflow	Duct vel	Gap vel	ΔP	Mass
[mm]	[mm]	[m ³ /h]	[m/s]	[m/s]	[Pa]	[kg]
200	200	576	4	8	35	8,1
300	150	648	4	12	63	10
300	200	864	4	12	59	11,1
300	300	1296	4	12	53	13,5
400	150	864	4	8	29	11,1
400	200	1152	4	8	26	12,3
400	300	1728	4	16	24	14,7
400	400	2304	4	8	20	17
500	150	1080	4	6,7	60	17,9
500	200	1440	4	6,7	54	19,7
500	300	2160	4	6,7	52	23,1
500	400	2880	4	6,7	50	26,6
500	500	3600	4	6,7	49	30,1
600	150	1296	4	12	64	20,5
600	200	1728	4	12	59	22,4
600	250	2160	4	12	55	24,3
600	300	2592	4	9	79	28
600	400	3456	4	12	49	30,1
600	500	4320	4	12	48	34
600	600	5184	4	12	49	37,8
800	200	2304	4	8	26	25,6
800	250	2880	4	8,5	65	32,1
800	300	3456	4	8,5	61	34,4
800	400	4608	4	8	21	33,3

Width [W]	Height [H]	Attenuation [dB] for frequency [Hz]							
[mm]	[mm]	63	125	250	500	1000	2000	4000	8000
200	150	2	3,6	12,5	22,4	32	30,1	22,1	17,6
200	200	2	3,6	12,5	22,4	32	30,1	22,1	17,6
300	150	1,8	7,8	20,3	39	39,6	33,2	22,6	18,2
300	200	1,8	7,8	20,3	39	39,6	33,2	22,6	18,2
300	300	1,8	7,8	20,3	39	39,6	33,2	22,6	18,2

Width [W]	Height [H]	Attenuation [dB] for frequency [Hz]							
[mm]	[mm]	63	125	250	500	1000	2000	4000	8000
400	150	1,1	4,7	14,3	26,3	24,4	15,8	10,5	7,6
400	200	1,1	4,7	14,3	26,3	24,4	15,8	10,5	7,6
400	300	1,1	4,7	14,3	26,3	24,4	15,8	10,5	7,6
400	400	1,1	4,7	14,3	26,3	24,4	15,8	10,5	7,6
500	150	2	3,6	12,5	22,4	32	30,1	22,1	17,6
500	200	2	3,6	12,5	22,4	32	30,1	22,1	17,6
500	300	2	3,6	12,5	22,4	32	30,1	22,1	17,6
500	400	2	3,6	12,5	22,4	32	30,1	22,1	17,6
500	500	2	3,6	12,5	22,4	32	30,1	22,1	17,6
600	150	1,8	7,8	20,3	39	39,6	33,2	22,6	18,2
600	200	1,8	7,8	20,3	39	39,6	33,2	22,6	18,2
600	250	1,8	7,8	20,3	39	39,6	33,2	22,6	18,2
600	300	2,1	5,8	19,1	28,1	36,6	35,7	29,1	27
600	400	1,8	7,8	20,3	39	39,6	33,2	22,6	18,2
600	500	1,8	7,8	20,3	39	39,6	33,2	22,6	18,2
600	600	1,8	7,8	20,3	39	39,6	33,2	22,6	18,2
800	200	1,1	4,7	14,3	26,3	24,4	15,8	10,5	7,6
800	250	2	5,1	17	26,3	35	34,2	26,8	23,9
800	300	2	5,1	17	26,3	35	34,2	26,8	23,9
800	400	1,1	4,7	14,3	26,3	24,4	15,8	10,5	7,6

Table 2. Values presented with attenuation material, mineral wool

2.3 Order code

SA-S-D-W-H, L-AT-ZT

Main options	
S = Type of duct connection	
C	Circular
R	Rectangular
D = Diameter of attenuator [mm]	0, 100, 125, 160, 200, 250, 315, 400, 500, 630
W = Width of attenuator [mm]	0, 200, 250, 300, 400, 500, 600, 800
H = Height of attenuator [mm]	0, 150, 200, 250, 300, 400

Other options	
L = Length of attenuator [mm]	600,1200
AT = Sound attenuation material	
W	Mineral wool
P	Polyester fibre
ZT = Tailored product	
N	No
Y	Yes (ETO)

Order code example

SA-C-100-200-150,L=600,AT=W,ZT=Y