

## ABSORPTION SILENCERS WITH 200 and 100 mm BAFFLES

SA  
SERIES

### OVERVIEW TECHNICAL CHARACTERISTICS

#### OVERVIEW:

The rectangular shaped SA series of silencers are basic elements for air-conditioning plants, as they allow the noise generated in air ducting to be reduced. They can be used for air or smoke intake or expulsion systems, ventilation for soundproofed cabins, cooling circuits for generator sets, and in air-conditioning and ventilation systems.

#### ABSORPTION SILENCERS:

These are used for all applications in which mean and high sound frequencies are between 500 Hz and 8000 Hz.

#### ABSORPTION SILENCERS AND RESONANCE:

These are used in all special applications where mean and low sound frequencies are between 120 Hz and 1000 Hz.

#### CHARACTERISTICS:

Silencer - outer frame: Made of galvanised steel sheet.

Silencer - fixing: By tightening bolts or nuts to connect the silencer's flange to that on the ducting.

Baffles - holding frame: In galvanised steel sheet.

Absorption and resonance baffles - holding sheet: The height of the baffle (H) is broken down into two equal sections and for the entire depth (P) the lower part is covered by a solid sheet. The upper part may be covered by a micro-expanded sheet.

Baffles - material used: Jacket made of high density mineral fibre, covered externally by a protective glass film.

Baffles - reaction to fire: Not inflammable - class 0.

#### SPECIAL SILENCERS:

SAR Model with baffles enclosed in micro-expanded steel sheet.

SARF model as the SAR but with baffles enclosed in micro-expanded steel sheet and water-repellent fibre form.

SR model absorption and resonance silencer

SRR model as per SR but with baffles enclosed by micro-expanded steel sheet.

SRRF MODEL as per SR but with baffles enclosed by micro-expanded steel sheet and water-repellent fiber form.

SL model External frame and baffle holding frame made of raw aluminium sheet.

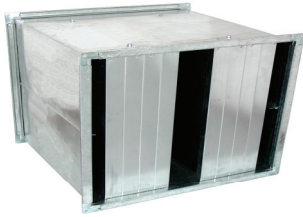
SLR model as per SL but with baffles enclosed by micro-expanded steel sheet.

SLRF model as per SL but with baffles enclosed by micro-expanded steel sheet and water-repellent fibre form.

SI model Outer frame and baffle holding frame made of stainless steel sheet.

SIR model as per SI but with baffles enclosed by micro-expanded steel sheet.

SIRF model as per SI but with baffles enclosed by micro-expanded steel sheet and water-repellent fibre form.



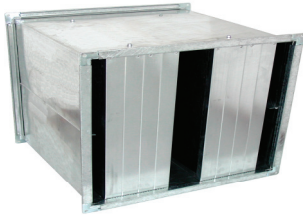
## ABSORPTION SILENCERS WITH 200 mm BAFFLES

SA 2  
SERIES

### PERFORMANCE

ABSORPTION SILENCERS
ATTENUATION BY SILENCERS EXPRESSED IN dB AND MEASURED FOR DIFFERENT BAFFLE PITCHES, WITH REFERENCE TO 8 OCTAVE BANDS

500 mm DEEP SILENCER									1700 mm DEEP SILENCER								
"D" baffle pitch in (mm)	Frequency in Hz								"D" baffle pitch in (mm)	Frequency in Hz							
	63	125	250	500	1000	2000	4000	8000		63	125	250	500	1000	2000	4000	8000
200	4	5	7	11	15	12	9	8	200	7	9	17	31	45	34	25	20
180	4	5	7	12	17	13	10	9	180	7	9	18	34	49	40	28	22
160	4	5	8	13	19	15	11	9	160	8	10	20	38	>50	42	32	26
140	4	6	8	14	20	17	12	10	140	8	11	23	42	>50	49	35	28
120	5	6	9	16	23	19	14	11	120	9	13	26	49	>50	>45	40	32
100	5	7	11	19	27	23	16	13	100	10	15	29	>52	>50	>45	47	38
700 mm DEEP SILENCER									2000 mm DEEP SILENCER								
"D" baffle pitch in (mm)	Frequency in Hz								"D" baffle pitch in (mm)	Frequency in Hz							
	63	125	250	500	1000	2000	4000	8000		63	125	250	500	1000	2000	4000	8000
200	4	5	8	14	21	16	13	10	200	7	9	18	34	>50	37	28	22
180	4	5	9	16	23	18	14	11	180	7	10	20	38	>50	43	32	25
160	4	6	10	18	26	20	15	12	160	8	11	22	43	>50	48	34	28
140	5	6	11	19	29	23	17	13	140	9	13	26	47	>50	>50	38	31
120	5	7	13	22	33	28	19	17	120	10	14	29	>50	>50	>50	44	35
100	6	8	15	27	39	32	22	18	100	11	17	35	>50	>50	>50	>50	40
1000 mm DEEP SILENCER									2200 mm DEEP SILENCER								
"D" baffle pitch in (mm)	Frequency in Hz								"D" baffle pitch in (mm)	Frequency in Hz							
	63	125	250	500	1000	2000	4000	8000		63	125	250	500	1000	2000	4000	8000
200	4	5	10	19	28	20	16	13	200	8	12	20	38	>50	40	30	25
180	5	5	11	21	30	23	17	14	180	10	13	23	43	>50	47	34	27
160	5	6	12	23	34	26	19	16	160	10	14	25	47	>50	>50	39	30
140	6	7	14	25	38	30	21	17	140	11	15	29	>50	>50	>50	46	34
120	6	8	16	28	44	35	24	20	120	12	17	34	>50	>50	>50	>50	40
100	7	10	19	35	>50	42	29	23	100	13	20	39	>50	>50	>50	>50	46
1200 mm DEEP SILENCER									2500 mm DEEP SILENCER								
"D" baffle pitch in (mm)	Frequency in Hz								"D" baffle pitch in (mm)	Frequency in Hz							
	63	125	250	500	1000	2000	4000	8000		63	125	250	500	1000	2000	4000	8000
200	5	7	13	23	34	25	19	16	200	8	12	21	40	>50	44	35	27
180	6	7	15	26	37	29	21	17	180	9	13	24	46	>50	>50	38	30
160	6	8	16	28	42	32	23	19	160	10	14	27	>50	>50	>50	44	33
140	7	9	18	32	47	37	26	21	140	11	15	31	>50	>50	>50	47	36
120	7	10	20	36	>50	43	30	24	120	12	17	36	>50	>50	>50	>50	44
100	8	12	23	44	>50	>52	35	28	100	13	20	43	>50	>50	>50	>50	>50
1500 mm DEEP SILENCER																	
"D" baffle pitch in (mm)	Frequency in Hz																
	63	125	250	500	1000	2000	4000	8000									
200	6	9	16	27	40	30	22	18									
180	7	10	17	29	45	34	24	20									
160	7	10	18	33	50	40	27	22									
140	8	11	20	37	>50	46	31	24									
120	9	12	24	43	>50	>50	35	29									
100	10	14	28	>52	>50	>52	41	33									



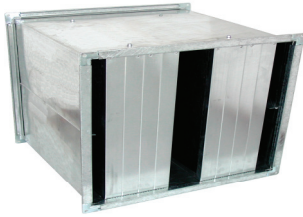
**ABSORPTION  
AND RESONANCE SILENCERS  
WITH 200 mm BAFFLES**

**SA2  
SERIES**

PERFORMANCE

<b>ABSORPTION AND RESONANCE SILENCERS</b>
<b>ATTENUATION BY SILENCERS EXPRESSED IN dB AND MEASURED FOR DIFFERENT BAFFLE PITCHES, WITH REFERENCE TO 8 OCTAVE BANDS</b>

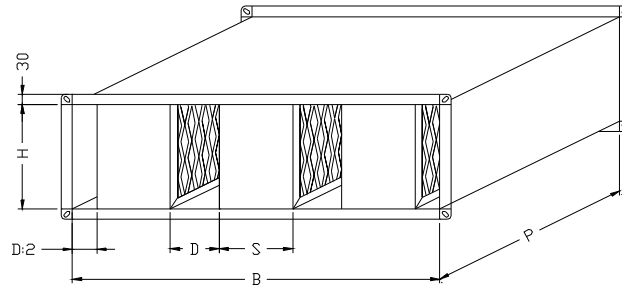
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180	4	6	9	9	9	7	6	6	180	7	13	25	26	27	18	13	13
160	4	7	9	10	10	8	6	7	160	8	14	28	29	30	21	15	15
140	5	7	11	11	11	9	7	7	140	8	16	30	31	32	23	16	16
120	5	8	12	12	13	10	7	7	120	9	18	34	36	37	26	18	18
100	5	9	13	14	15	11	8	8	100	10	22	40	42	43	30	21	21
700 mm DEEP SILENCER									2000 mm DEEP SILENCER								
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180	5	7	12	12	12	9	8	8	180	8	15	27	28	29	20	14	14
160	5	8	13	13	14	10	8	8	160	8	17	30	31	32	23	16	16
140	6	9	14	14	15	11	9	9	140	9	19	33	34	36	25	18	18
120	6	10	16	16	17	13	9	9	120	10	22	38	41	42	29	20	20
100	6	11	19	19	20	15	10	10	100	12	27	46	47	49	33	23	23
1000 mm DEEP SILENCER									2200 mm DEEP SILENCER								
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180	5	9	14	15	16	11	9	9	180	8	16	29	30	31	22	15	15
160	5	10	16	17	18	13	9	9	160	8	19	32	34	35	24	17	17
140	6	11	18	19	20	14	10	10	140	9	20	37	38	40	28	19	19
120	6	12	21	22	23	16	12	12	120	10	23	43	44	46	42	22	22
100	7	14	24	25	26	19	13	13	100	12	28	50	>50	>50	47	25	25
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200	6	9	16	17	18	12	9	9	200	8	17	30	31	32	23	14	14
180	6	10	17	18	19	13	10	10	180	9	18	32	34	35	24	16	16
160	6	11	19	20	22	15	11	11	160	10	20	36	37	39	27	19	18
140	7	12	22	23	24	17	12	12	140	11	23	41	42	44	30	22	22
120	7	14	25	26	27	19	14	14	120	12	26	47	50	50	35	25	25
100	8	17	29	31	32	22	15	15	100	14	30	>50	>50	>50	42	28	28
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180	6	11	21	22	23	15	11	11									
160	7	12	24	25	25	17	12	12									
140	7	14	26	27	28	19	14	14									
120	8	17	29	30	32	22	16	16									
100	9	19	34	36	38	26	18	18									



## ABSORPTION SILENCERS WITH 200 mm BAFFLES

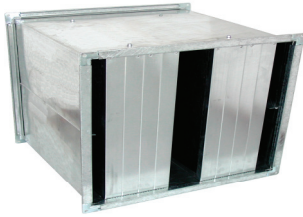
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TECHNICAL DRAWING - BASE DIMENSIONS  
PRESSURE DROP



200 mm Baffles	EXACT DIMENSIONS THAT CAN BE MADE FOR THE SILENCER BASES AND NUMBER OF BAFFLES IN RELATION TO THE PITCH								
	Number of baffles								
Baffle pitch in (mm)	1	2	3	4	5	6	7	8	9
	B (mm)								
200	200	400	600	800	1000	1200	1400	1600	1800
180	180	360	540	720	900	1080	1260	1440	1620
160	160	320	480	640	800	960	1120	1280	1440
140	140	280	420	560	700	840	980	1120	1260
120	120	240	360	480	600	720	840	960	1080
100	100	200	300	400	500	600	700	800	900

200 mm Baffles	PRESSURE DROP IN PASCAL AND AIR FRONT VELOCITY FOR A DEPTH OF 1 METRE							
		Distance between baffles in mm.						
		200	180	160	140	120	100	
Front velocity $V_f$ in m/s	3,0				20	25	40	
	3,5			25	30	40	60	
	4,0	20	25	30	40	55	80	
	4,5	25	30	40	50	65	100	
	5,0	35	40	50	60	85	120	
	5,5	40	50	60	75	100	150	
	6,0	50	60	70	90	120		
	7,0	65	80	100	120	160		
	8,0	85	100	130	160			
	9,0	110	125	150				
10,0	130	150						

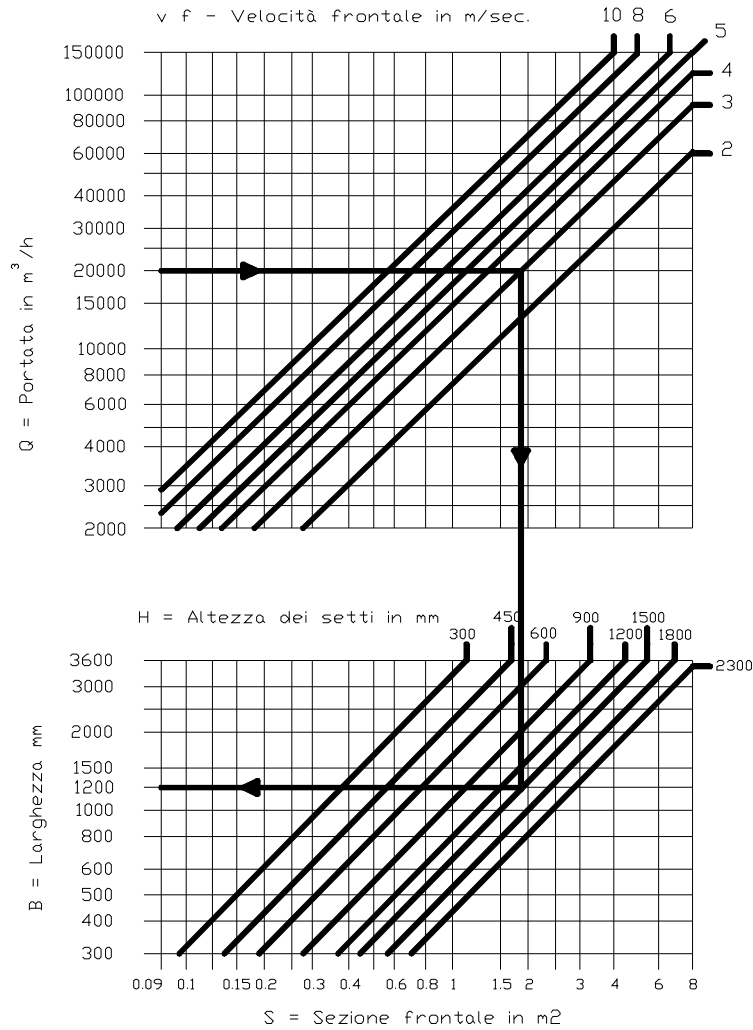


## ABSORPTION SILENCERS WITH 200 mm BAFFLES

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SELECTION DIAGRAM  
PRESSURE DROP CORRECTION COEFFICIENT

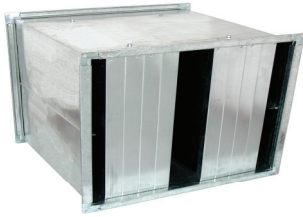
DIAGRAM FOR SELECTING A SILENCER WITH 200 mm BAFFLES



PRESSURE DROP CORRECTION COEFFICIENT  
FOR SILENCERS WITH A DEPTH NOT EQUAL TO 1000 mm

Depth	500 mm	0,9
	1000 mm	1
	1500 mm	1,12
	2000 mm	1,25
	2500 mm	1,36

"B" mm.	da	300	600	900	1200	1500	1800	2100	2400
	a	400	800	1200	1600	2000	2400	2800	3200
	N° baffles	1	2	3	4	5	6	7	8



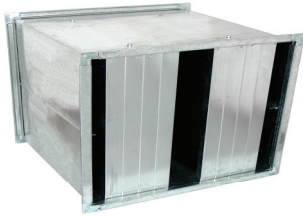
## ABSORPTION SILENCERS WITH 100 mm BAFFLES

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PERFORMANCE

ABSORPTION SILENCERS
ATTENUATION BY SILENCERS EXPRESSED IN dB AND MEASURED FOR DIFFERENT BAFFLE PITCHES, WITH REFERENCE TO 8 OCTAVE BANDS

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100	3	3	6	9	19	23	16	12	100	6	6	13	26	>50	>50	>50	34
90	3	4	6	10	22	26	18	13	90	6	8	14	29	>50	>50	>50	38
80	3	4	7	11	25	29	20	15	80	7	9	16	34	>50	>50	>50	46
70	4	5	7	12	27	31	22	16	70	7	9	17	34	>50	>50	>50	49
60	4	5	8	13	31	36	25	18	60	8	10	18	38	>50	>50	>50	>50
50	4	5	9	15	36	42	29	20	50	9	11	23	46	>50	>50	>50	>50
700 mm DEEP SILENCER									2000 mm DEEP SILENCER								
"D" baffle pitch in (mm)	Frequency in Hz								"D" baffle pitch in (mm)	Frequency in Hz							
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100	4	4	7	12	28	32	22	17	100	6	7	14	28	>50	>50	>50	36
90	4	5	7	13	31	36	25	18	90	6	8	15	31	>50	>50	>50	42
80	4	5	8	15	35	40	28	20	80	7	9	17	35	>50	>50	>50	49
70	5	6	9	16	38	45	30	22	70	8	10	18	37	>50	>50	>50	>50
60	5	6	10	19	45	>50	36	25	60	8	10	20	44	>50	>50	>50	>50
50	5	7	11	21	>50	>50	42	30	50	9	12	26	49	>50	>50	>50	>50
1000 mm DEEP SILENCER									2200 mm DEEP SILENCER								
"D" baffle pitch in (mm)	Frequency in Hz								"D" baffle pitch in (mm)	Frequency in Hz							
	63	125	250	500	1000	2000	4000	8000		63	125	250	500	1000	2000	4000	8000
100	4	4	9	16	36	42	29	20	100	7	9	16	30	>50	>50	>50	42
90	4	5	10	17	41	48	33	22	90	7	10	18	34	>50	>50	>50	48
80	5	6	11	19	48	>50	38	27	80	8	11	20	38	>50	>50	>50	>50
70	6	6	11	21	50	>50	40	28	70	9	12	22	40	>50	>50	>50	>50
60	6	7	12	24	>50	>50	48	32	60	10	13	24	47	>50	>50	>50	>50
50	7	8	14	27	>50	>50	>50	38	50	11	14	28	>50	>50	>50	>50	>50
1200 mm DEEP SILENCER									2500 mm DEEP SILENCER								
"D" baffle pitch in (mm)	Frequency in Hz								"D" baffle pitch in (mm)	Frequency in Hz							
	63	125	250	500	1000	2000	4000	8000		63	125	250	500	1000	2000	4000	8000
100	4	5	10	18	44	48	36	25	100	8	9	18	34	>50	>50	>50	46
90	4	6	11	21	48	50	41	29	90	9	11	19	38	>50	>50	>50	>50
80	5	7	13	23	49	>50	46	34	80	10	12	21	43	>50	>50	>50	>50
70	6	7	14	25	>50	>50	49	38	70	10	13	24	44	>50	>50	>50	>50
60	6	8	16	28	>50	>50	>50	40	60	11	15	27	48	>50	>50	>50	>50
50	7	9	18	34	>50	>50	>50	48	50	12	17	32	>50	>50	>50	>50	>50
1500 mm DEEP SILENCER																	
"D" baffle pitch in (mm)	Frequency in Hz																
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100	5	6	11	22	>50	>50	42	28									
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80	7	8	14	28	>50	>50	>50	37									
70	8	8	16	30	>50	>50	>50	40									
60	8	9	17	34	>50	>50	>50	47									
50	9	10	20	40	>50	>50	>50	>50									



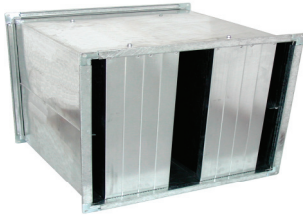
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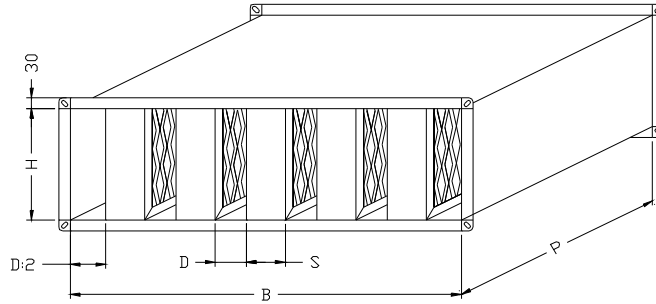
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80	6	9	14	14	18	17	13	12	80	9	16	30	32	41	38	29	25
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100	6	9	16	17	21	20	15	14	100	9	16	29	30	40	38	27	25
90	6	10	18	19	22	22	15	15	90	10	18	xx	35	43	42	30	27
80	7	11	20	21	26	25	18	16	80	10	20	36	40	48	48	33	31
70	7	12	22	23	29	28	20	17	70	11	22	41	43	>50	>50	37	33
60	8	14	26	29	33	32	23	18	60	12	24	48	>50	>50	>50	43	30
50	9	16	29	31	40	37	27	25	50	14	28	>50	>50	>50	>50	>50	46
1500 mm DEEP SILENCER																	
"D" baffle pitch in (mm)	Frequency in Hz																
	63	125	250	500	1000	2000	4000	8000									
100	7	10	19	20	25	23	18	16									
90	7	12	21	22	28	26	19	18									
80	8	14	23	25	30	29	23	21									
70	8	15	26	27	34	33	24	22									
60	9	16	30	31	38	36	27	25									
50	9	18	35	47	46	44	32	29									



## ABSORPTION SILENCERS WITH 100 mm BAFFLES

SA1  
SERIES

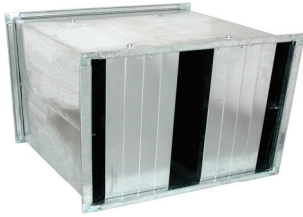
TECHNICAL DRAWING - BASE DIMENSIONS  
PRESSURE DROP



100 mm Baffles	EXACT SIZES THAT CAN BE MADE FOR SILENCER BASES AND NUMBER OF BAFFLES IN RELATION TO PITCH								
Baffle pitch in (mm)	Number of baffles								
	1	2	3	4	5	6	7	8	9
	B (mm)								
100	100	200	300	400	500	600	700	800	900
90	90	180	270	360	450	540	630	720	810
80	80	160	240	320	400	480	560	640	720
70	70	140	210	280	350	420	490	560	630
60	60	120	180	240	300	360	420	480	540
50	50	100	150	200	250	300	350	400	450

100 mm Baffles	PRESSURE DROP IN PASCAL AND AIR FRONT VELOCITY FOR A DEPTH OF 1 METRE							
Frontal velocity $V_f$ in m/s		Distance between baffles in mm.						
		100	90	80	70	60	50	
	3,0				20	25	40	
	3,5			25	30	40	60	
	4,0	20	25	30	40	55	80	
	4,5	25	30	40	50	65	100	
	5,0	35	40	50	60	85	120	
	5,5	40	50	60	75	100	150	
	6,0	50	60	70	90	120		
	7,0	65	80	100	120	160		
	8,0	85	100	130	160			
	9,0	110	125	150				
	10,0	130	150					



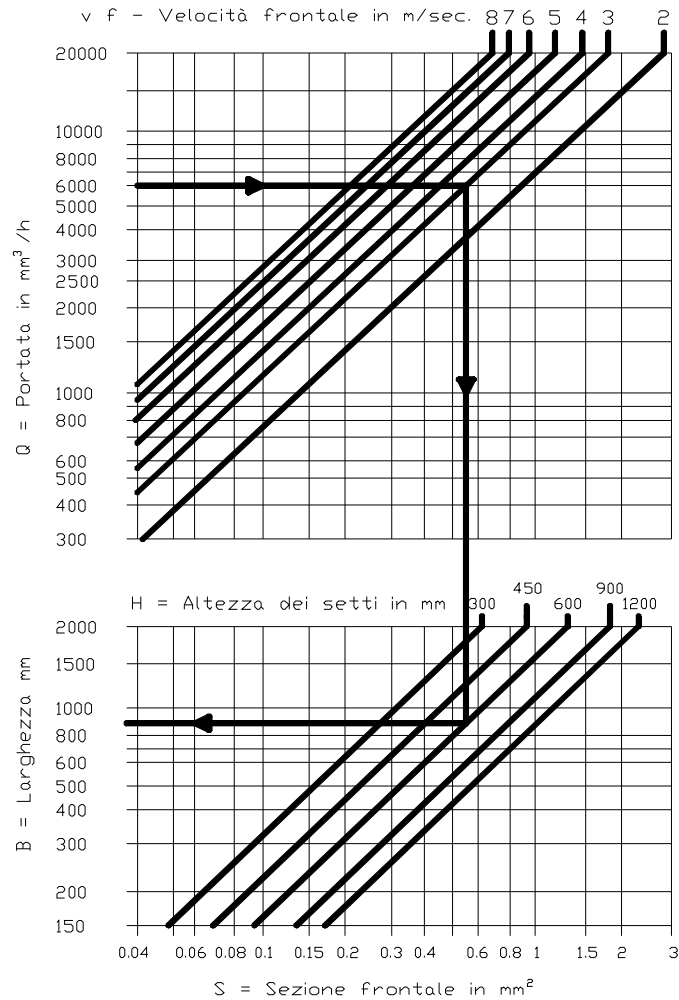


## ABSORPTION SILENCERS WITH 100 mm BAFFLES

SA1  
SERIES

SELECTION DIAGRAM  
PRESSURE DROP CORRECTION COEFFICIENT

SELECTION DIAGRAM FOR A SILENCER WITH 100 mm BAFFLES

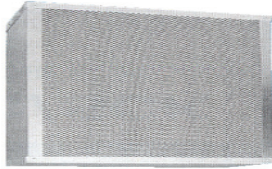


PRESSURE DROP CORRECTION COEFFICIENT  
FOR SILENCERS WITH A DEPTH NOT EQUAL TO 1000 mm

Depth	500 mm	0,9
	1000 mm	1
	1500 mm	1,12
	2000 mm	1,25
	2500 mm	1,36

"B" mm.	da	150	300	450	600	750	900	1050	1200
	a	200	400	600	800	1000	1200	1400	1600
	N° baffles	1	2	3	4	5	6	7	8

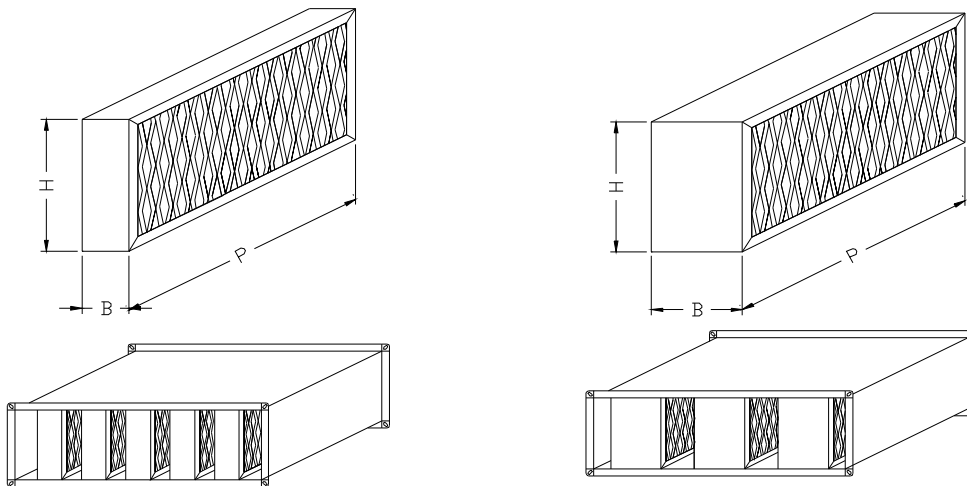




## BAFFLES FOR ABSORPTION SILENCERS ABSORPTION/RESONANCE SILENCERS

SS1  
SS2  
SS35  
SERIES

TECHNICAL DRAWING  
TECHNICAL CHARACTERISTICS



### CHARACTERISTICS:

Baffles, holding frame : In galvanised steel sheet.

Absorption baffles, holding sheet : In micro-expanded sheet.

Absorption and resonance baffles, holding sheet : the baffle is divided into two equal part in height (H) and the lower part is coated throughout its depth by a solid sheet. The top part may be coated with a micro-expanded sheet.

Baffles, materials used : Jacket in high density mineral fibre, coated externally with a protective glass film.

Baffles, reaction to fire : Not inflammable - class 0.

### SPECIAL BAFFLES:

SSR model with baffles enclosed in micro-expanded steel sheet.

SSRF model with baffles enclosed in micro-expanded steel sheet and water-repellent fibre form.

SSL model baffle holding frame made of raw aluminium sheet.

SSLR model as per SSL but with baffles enclosed by micro-expanded steel sheet.

SSLRF model as per SSL but with baffles enclosed by micro-expanded steel sheet and water-repellent fibre form.

SSI model baffle holding frame made of stainless steel sheet.

SSIR model as per SSI but with baffles enclosed by micro-expanded steel sheet.

SSIRF model as per SSI but with baffles enclosed by micro-expanded steel sheet and water-repellent fibre form.





## CIRCULAR ABSORPTION SILENCERS WITH OR WITHOUT POD

SAC  
SACO  
SERIES

### OVERVIEW TECHNICAL CHARACTERISTICS

#### OVERVIEW:

The SC series of circular silencers are basic element in any air-conditioning system, as they make it possible to reduce the noise propagated in the air ducting. Various assembly systems can be used, allowing them to be used for air or smoke intake or extraction systems, ventilation for soundproof cabins, cooling circuits for generator sets, and air-conditioning and ventilation systems, as well as fitting them directly on axial fans or on outlet of centrifugal fans.

#### SILENCERS WITH POD :

These are used in all special applications, with an air flow rate that varies from a minimum of 1500 m<sup>3</sup>/h to a maximum of 360,000 m<sup>3</sup>/h.

#### SILENCERS WITHOUT POD :

These are used in all applications where the air flow rate varies from a minimum of 1500 m<sup>3</sup>/h to a maximum of 540,000 m<sup>3</sup>/h.

#### CHARACTERISTICS :

**Silencer, outer frame :** made of galvanised steel sheet.

**Silencer, fixing without flanges :** By reinforced couplings in the circular duct.

**Silencer, fixing with flanges :** By tightening bolts or nuts on flanges with holes on the two ends of the silencer and on the axial fan or circular duct.

**Silencer, fixing with collar :** By tightening pressure collars between the two edges at the two ends of the silencer, and that on the circular duct fitted with an edging.

**Absorption baffle, holding frame :** Enclosed in the cylindrical silencer with galvanised steel sheet.

**Absorption baffle, external holding sheet :** In micro-expanded sheet.

**Absorption baffle, material used :** Jacket in high density mineral fibre, coated externally with a protective glass film.

**Baffle, reaction to fire :** Not inflammable - class 0.

**Pod, holding frame :** In galvanised steel sheet.

**Pod, protective sheet :** In micro-expanded steel sheet, to avoid delamination of the mineral fibre due to the passage of the airflow.

**Pod, construction system, material used, and assembly system :** Designed and made with a conical shape in order to reduce the noise caused by the impact of air and dynamic losses at the intake, the pod contains a soundproofing jacket made of high density mineral fibre, that is coated externally by a film of protective glass, enclosed by a micro-expanded steel sheet. The fixing position for the pod is concentric, inside the holding frame.

**Pod, reaction to fire :** Not inflammable - class 0.



## CIRCULAR ABSORPTION SILENCERS WITHOUT POD

SAC  
SERIES

### ATTENUATION PERFORMANCE

ATTENUATION FOR SILENCERS EXPRESSED IN dB WITH REFERENCE TO 8 OCTAVE BANDS
---

#### D x 1 SILENCER WITH A DEPTH EQUAL TO ITS DIAMETER

Nominal diametre	Fitted in a ducting system								Other applications				
	Frequencies in Hz								Frequencies in Hz				
	63	125	250	500	1000	2000	4000	8000	63	125	250	500	>1000
	Attenuation in dB								Attenuation in dB				
250	1	3	5	9	14	10	7	8	15	10	5	0	0
315	2	4	6	10	14	10	7	8	15	10	5	0	0
355	2	4	6	10	14	10	7	8	14	8	4	0	0
400	2	4	6	10	14	10	7	8	13	7	4	0	0
450	2	4	6	10	14	10	7	8	12	6	3	0	0
500	2	4	6	10	14	10	7	8	11	6	2	0	0
560	2	4	6	10	14	10	7	8	10	5	2	0	0
630	3	4	8	14	14	9	8	7	9	5	1	0	0
710	3	4	8	14	14	9	8	7	8	4	1	0	0
800	3	4	8	14	14	9	8	7	7	3	1	0	0
900	3	4	9	14	14	8	7	7	5	2	0	0	0
1000	3	4	9	14	14	8	7	7	5	2	0	0	0

ATTENUATION FOR SILENCERS EXPRESSED IN dB WITH REFERENCE TO 8 OCTAVE BANDS
---

#### D x 1,5 SILENCER DEPTH, ONE AND A HALF ITS DIAMETER

Nominal diametre	Fitted in a ducting system								Other applications				
	Frequencies in Hz								Frequencies in Hz				
	63	125	250	500	1000	2000	4000	8000	63	125	250	500	>1000
	Attenuation in dB								Attenuation in dB				
250	2	4	7	12	15	11	8	9	15	10	5	0	0
315	3	5	8	13	16	12	9	9	15	10	5	0	0
355	3	5	8	13	16	12	9	9	14	8	4	0	0
400	3	5	8	13	16	12	9	9	13	7	4	0	0
450	3	5	8	13	16	12	9	9	12	6	3	0	0
500	3	5	8	13	16	12	9	9	11	6	2	0	0
560	3	5	8	13	16	12	9	9	10	5	2	0	0
630	4	5	10	16	16	11	9	8	9	5	1	0	0
710	4	5	10	16	16	11	9	8	8	4	1	0	0
800	4	5	10	16	16	11	9	8	7	3	1	0	0
900	4	5	10	16	14	10	9	8	5	2	0	0	0
1000	4	5	10	16	14	10	9	8	5	2	0	0	0



## CIRCULAR ABSORPTION SILENCERS WITHOUT POD

SAC  
SERIES

### ATTENUATION PERFORMANCE

ATTENUATION FOR SILENCERS EXPRESSED IN dB  
WITH REFERENCE TO 8 OCTAVE BANDS

D x 2 SILENCER WITH A DEPTH EQUAL TO TWICE ITS DIAMETER

Nominal diametre	Fitted in a ducting system								Other applications				
	Frequencies in Hz								Frequencies in Hz				
	63	125	250	500	1000	2000	4000	8000	63	125	250	500	>1000
	Attenuation in dB								Attenuation in dB				
250	4	7	12	18	22	17	13	13	15	10	5	0	0
315	4	7	12	18	22	17	13	13	15	10	5	0	0
355	4	7	12	18	22	17	13	13	14	8	4	0	0
400	4	7	11	17	21	17	13	12	13	7	4	0	0
450	4	7	11	17	21	17	13	12	12	6	3	0	0
500	4	7	10	15	19	16	12	10	11	6	2	0	0
560	4	7	10	15	19	16	12	10	10	5	2	0	0
630	6	8	14	23	24	15	13	10	9	5	1	0	0
710	6	8	13	22	22	14	13	9	8	4	1	0	0
800	6	8	12	20	18	13	11	9	7	3	1	0	0
900	6	8	14	22	20	13	12	10	5	2	0	0	0
1000	6	8	14	22	20	13	12	10	5	2	0	0	0

The attenuation values *'Fitted in a ducting system'* relate to silencers fitted in a ducted plant system (duct - silencer - duct).

Where silencers are positioned at the end of ducting, or fitted directly to the inlet on an axial fan or intake on an centrifugal fan, the additional attenuation shown in the *'different montages'* shall be added.



## CIRCULAR ABSORPTION SILENCERS WITHOUT POD

SAC  
SERIES

### PRESSURE DROP

Silencer without pod  
Depth equal to diameter

Diameter	front velocity m/s								
	2	3	4	5	6	7	8	9	10
250	1,5	3,4	6,1	9,4	13,3	17,9	23,1	28,9	35,3
315	1,4	3,1	5,5	8,5	12,1	16,3	21,0	26,3	32,1
355	1,2	2,8	5,0	7,7	10,9	14,7	19,0	23,8	29,0
400	1,2	2,7	4,8	7,4	10,5	14,1	18,2	22,8	27,8
450	1,1	2,6	4,6	7,0	10,0	13,5	17,4	21,8	26,6
500	1,1	2,5	4,4	6,7	9,6	12,9	16,6	20,8	25,4
560	1,0	2,4	4,2	6,4	9,1	12,2	15,8	19,8	24,2
630	1,0	2,2	4,0	6,1	8,7	11,6	15,0	18,8	23,0
710	0,9	2,1	3,7	5,8	8,2	11,0	14,3	17,9	21,8
800	0,9	2,0	3,5	5,4	7,8	10,4	13,5	16,9	20,6
900	0,8	1,9	3,3	5,1	7,3	9,8	12,7	15,9	19,4
1000	0,8	1,8	3,1	4,8	6,8	9,2	11,9	14,9	18,2

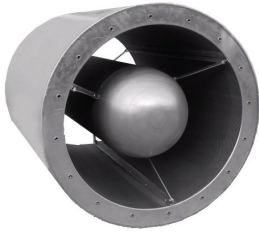
Silencer without pod  
Depth equal to one end half diameter

Diameter	front velocity m/s								
	2	3	4	5	6	7	8	9	10
250	1,8	4	6,8	10,7	15,2	20,5	26,4	32,9	40,3
315	1,6	3,6	6,2	9,7	13,8	18,6	24,0	29,9	36,6
355	1,5	3,3	5,9	9,0	12,9	17,3	22,4	28,0	34,2
400	1,4	3,2	5,6	8,6	12,3	16,6	21,4	26,8	32,8
450	1,4	3,0	5,4	8,3	11,8	15,9	20,5	25,7	31,3
500	1,3	2,9	5,1	7,9	11,3	15,2	19,6	24,5	29,9
560	1,2	2,7	4,8	7,3	10,4	14,0	18,2	22,7	27,7
630	1,1	2,5	4,5	7,0	9,9	13,3	17,3	21,6	26,3
710	1,1	2,4	4,3	6,6	9,4	12,6	16,3	20,4	24,9
800	1,0	2,3	4,0	6,2	8,9	11,9	15,4	19,3	23,6
900	1,0	2,1	3,8	5,9	8,4	11,2	14,5	18,2	22,2
1000	0,9	2,0	3,6	5,5	7,8	10,5	13,6	17,0	20,8

Silencer without pod  
Depth equal to twice diameter

Diameter	front velocity m/s								
	2	3	4	5	6	7	8	9	10
250	1,9	4,1	7	10,9	15,5	20,9	27	33,7	41,1
315	1,7	3,7	6,4	9,9	14,1	19,0	24,5	30,6	37,4
355	1,6	3,5	6,1	9,5	13,5	18,2	23,5	29,4	35,9
400	1,5	3,4	5,8	9,1	12,9	17,4	22,5	28,2	34,4
450	1,5	3,2	5,6	8,7	12,4	16,7	21,6	26,9	32,9
500	1,4	3,1	5,3	8,3	11,8	15,9	20,6	25,7	31,4
560	1,2	2,8	4,9	7,5	10,7	14,4	18,6	23,3	28,5
630	1,2	2,6	4,6	7,1	10,2	13,7	17,7	22,2	27,1
710	1,1	2,5	4,4	6,8	9,6	13,0	16,8	21,0	25,6
800	1,1	2,3	4,1	6,4	9,1	12,3	15,8	19,8	24,2
900	1,0	2,2	3,9	6,0	8,6	11,6	14,9	18,7	22,8
1000	0,9	2,1	3,7	5,6	8,0	10,8	14,0	17,5	21,4





## CIRCULAR ABSORPTION SILENCERS WITH POD

SACO  
SERIES

### ATTENUATION PERFORMANCE

ATTENUATION FOR SILENCERS EXPRESSED IN dB WITH REFERENCE TO 8 OCTAVE BANDS
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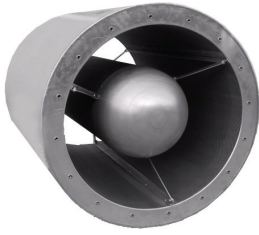
#### D x 1 SILENCER WITH A DEPTH EQUAL TO ITS DIAMETER

Nominal diametre	Fitted in a ducting system								Other applications				
	Frequencies in Hz								Frequencies in Hz				
	63	125	250	500	1000	2000	4000	8000	63	125	250	500	>1000
	Attenuation in dB								Attenuation in dB				
315	4	6	8	13	20	21	18	16	15	10	5	0	0
355	4	6	8	13	20	21	18	16	14	8	4	0	0
400	4	6	8	12	18	19	16	14	13	7	4	0	0
450	4	6	8	12	18	19	16	14	12	6	3	0	0
500	4	6	8	11	13	16	12	11	11	6	2	0	0
560	4	6	8	11	13	16	12	11	10	5	2	0	0
630	4	6	9	17	26	21	18	12	9	5	1	0	0
710	4	6	9	17	23	20	18	11	8	4	1	0	0
800	4	6	9	16	17	16	14	11	7	3	1	0	0
900	4	6	11	22	21	16	14	11	5	2	0	0	0
1000	4	6	11	22	21	16	14	11	5	2	0	0	0

ATTENUATION FOR SILENCERS EXPRESSED IN dB WITH REFERENCE TO 8 OCTAVE BANDS
---

#### D x 1,5 SILENCER DEPTH, ONE AND A HALF ITS DIAMETER

Nominal diametre	Fitted in a ducting system								Other applications				
	Frequencies in Hz								Frequencies in Hz				
	63	125	250	500	1000	2000	4000	8000	63	125	250	500	>1000
	Attenuation in dB								Attenuation in dB				
315	5	7	11	18	25	27	23	21	15	10	5	0	0
355	5	7	11	18	25	27	23	21	14	8	4	0	0
400	5	7	11	16	21	22	19	17	13	7	4	0	0
450	5	7	11	16	21	22	19	17	12	6	3	0	0
500	5	7	11	13	14	16	12	12	11	6	2	0	0
560	5	7	11	13	14	16	12	12	10	5	2	0	0
630	5	8	12	23	32	27	24	16	9	5	1	0	0
710	5	8	12	21	27	25	23	14	8	4	1	0	0
800	5	8	12	19	19	19	22	13	7	3	1	0	0
900	5	8	14	22	26	22	18	13	5	2	0	0	0
1000	5	8	14	22	26	22	18	13	5	2	0	0	0



## CIRCULAR ABSORPTION SILENCERS WITH POD

SACO  
SERIES

### ATTENUATION PERFORMANCE

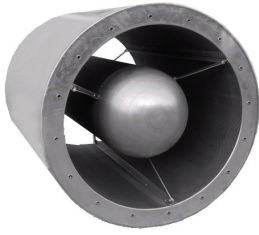
ATTENUATION FOR SILENCERS EXPRESSED IN dB  
WITH REFERENCE TO 8 OCTAVE BANDS

#### D x 2 SILENCER WITH A DEPTH EQUAL TO TWICE ITS DIAMETER

Nominal diametre	Fitted in a ducting system								Other applications				
	Frequencies in Hz								Frequencies in Hz				
	63	125	250	500	1000	2000	4000	8000	63	125	250	500	>1000
	Attenuation in dB								Attenuation in dB				
315	7	10	15	24	32	35	30	28	15	10	5	0	0
355	7	10	15	24	32	35	30	28	14	8	4	0	0
400	7	10	15	21	26	26	24	22	13	7	4	0	0
450	7	10	15	21	26	26	24	22	12	6	3	0	0
500	7	10	15	16	17	17	13	13	11	6	2	0	0
560	7	10	15	16	17	17	13	13	10	5	2	0	0
630	8	11	16	30	39	35	32	22	9	5	1	0	0
710	8	11	16	27	32	32	29	19	8	4	1	0	0
800	8	11	16	24	23	23	24	17	7	3	1	0	0
900	8	11	19	30	32	30	24	17	5	2	0	0	0
1000	8	11	19	30	32	30	24	17	5	2	0	0	0

The attenuation values "Fitted in a ducting system" relate to silencers fitted in a ducted plant system (duct - silencer - duct).

Where silencers are positioned at the end of ducting, or fitted directly to the inlet on an axial fan or intake on an centrifugal fan, the additional attenuation shown in the "different montages" shall be added.



## CIRCULAR ABSORPTION SILENCERS WITH POD

SACO  
SERIES

### PRESSURE DROP

Silencer with pod  
Depth equal to diameter

Diameter	front velocity m/s								
	2	3	4	5	6	7	8	9	10
315	2,8	6,2	10,9	16,9	24,1	32,5	42,0	52,5	64,1
355	2,6	5,9	10,4	16,0	22,8	30,6	39,6	49,6	60,5
400	2,6	5,9	10,4	16,0	22,8	30,6	39,6	49,6	60,5
450	2,6	5,9	10,4	16,0	22,8	30,6	39,6	49,6	60,5
500	2,6	5,9	10,4	16,0	22,8	30,6	39,6	49,6	60,5
560	2,6	5,9	10,4	16,0	22,8	30,6	39,6	49,6	60,5
630	2,6	5,9	10,4	16,0	22,8	30,6	39,6	49,6	60,5
710	2,6	5,9	10,4	16,0	22,8	30,6	39,6	49,6	60,5
800	2,6	5,9	10,4	16,0	22,8	30,6	39,6	49,6	60,5
900	2,6	5,9	10,4	16,0	22,8	30,6	39,6	49,6	60,5
1000	2,6	5,9	10,4	16,0	22,8	30,6	39,6	49,6	60,5

Silencer with pod  
Depth equal to one end half diameter

Diameter	front velocity m/s								
	2	3	4	5	6	7	8	9	10
315	3,2	7,1	12,4	19,3	27,5	37,1	47,9	59,8	73,1
355	3,1	6,9	12,2	18,8	26,8	36,1	46,6	58,3	71,2
400	3,1	6,9	12,2	18,8	26,8	36,1	46,6	58,3	71,2
450	3,1	6,9	12,2	18,8	26,8	36,1	46,6	58,3	71,2
500	3,1	6,9	12,2	18,8	26,8	36,1	46,6	58,3	71,2
560	3,0	6,7	11,9	18,3	26,1	35,1	45,4	56,8	69,3
630	3,0	6,7	11,9	18,3	26,1	35,1	45,4	56,8	69,3
710	3,0	6,7	11,9	18,3	26,1	35,1	45,4	56,8	69,3
800	3,0	6,7	11,9	18,3	26,1	35,1	45,4	56,8	69,3
900	3,0	6,7	11,9	18,3	26,1	35,1	45,4	56,8	69,3
1000	3,0	6,7	11,9	18,3	26,1	35,1	45,4	56,8	69,3

Silencer with pod  
Depth equal to twice diameter

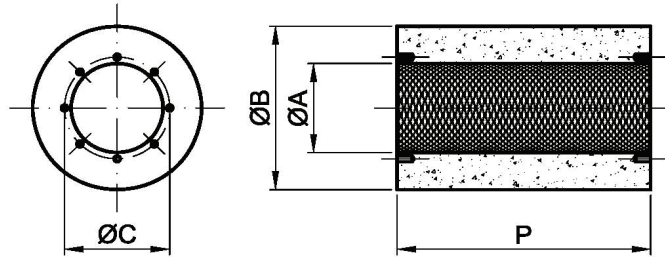
Diameter	front velocity m/s								
	2	3	4	5	6	7	8	9	10
315	3,3	7,3	12,7	19,7	28,1	37,9	49,0	61,2	74,8
355	3,3	7,3	12,7	19,7	28,1	37,9	49,0	61,2	74,8
400	3,3	7,3	12,7	19,7	28,1	37,9	49,0	61,2	74,8
450	3,3	7,3	12,7	19,7	28,1	37,9	49,0	61,2	74,8
500	3,3	7,3	12,7	19,7	28,1	37,9	49,0	61,2	74,8
560	3,1	6,9	12,2	18,8	26,8	36,1	46,6	58,3	71,2
630	3,1	6,9	12,2	18,8	26,8	36,1	46,6	58,3	71,2
710	3,1	6,9	12,2	18,8	26,8	36,1	46,6	58,3	71,2
800	3,1	6,9	12,2	18,8	26,8	36,1	46,6	58,3	71,2
900	3,1	6,9	12,2	18,8	26,8	36,1	46,6	58,3	71,2
1000	3,1	6,9	12,2	18,8	26,8	36,1	46,6	58,3	71,2



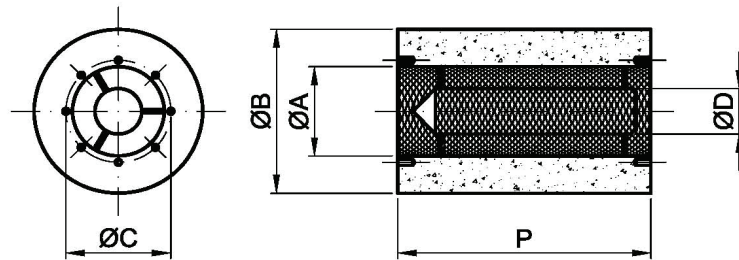
## CIRCULAR ABSORPTION SILENCERS WITH OR WITHOUT POD

SAC  
SACO  
SERIES

### DIMENSIONS



Modell	P (mm)			ØA (mm)	ØB (mm)	ØC (mm)	Holes
	dx1	dx1,5	dx2				
250	250	375	500	250	390	280	4xM8
315	315	472,5	630	315	455	355	8xM8
355	355	532,5	710	355	495	395	8xM8
400	400	600	800	400	540	450	8xM10
450	450	675	900	450	610	500	8xM10
500	500	750	1000	500	660	560	12xM10
560	560	840	1120	560	720	620	12xM10
630	630	945	1260	630	790	690	12xM10
710	710	1065	1420	710	870	770	16xM10
800	800	1200	1600	800	1000	860	16xM10
900	900	1350	1800	900	1100	970	16xM10
1000	1000	1500	2000	1000	1200	1070	16xM10



Modell	P (mm)			ØA (mm)	ØB (mm)	ØC (mm)	ØD (mm)	Holes
	dx1	dx1,5	dx2					
315	315	472,5	630	315	455	355	140	8xM8
355	355	532,5	710	355	495	395	200	8xM8
400	400	600	800	400	540	450	200	8xM10
450	450	675	900	450	610	500	245	8xM10
500	500	750	1000	500	660	560	245	12xM10
560	560	840	1120	560	720	620	295	12xM10
630	630	945	1260	630	790	690	295	12xM10
710	710	1065	1420	710	870	770	380	16xM10
800	800	1200	1600	800	1000	860	380	16xM10
900	900	1350	1800	900	1100	970	380	16xM10
1000	1000	1500	2000	1000	1200	1070	650	16xM10