



### APPLICATIONS

Directly mounted on axial fans or in duct mounted.

### EXECUTION

The Silencer is normally manufactured in mild steel, hot dip galvanized, with 100 mm insulation material, type Rockwool, with perforated stainless steel plate inside.

Can be made in custom made lengths. With threaded bolt connection as standard.

- Silencer without core, **LD**, for low pressure drop and high air speeds. Suitable for small to medium diameters. Available in sizes from diam  $\varnothing 200 - \varnothing 1600$  mm
- Silencers with core, **LDC**, for additional attenuation. Especially suitable for bigger diameters. (e.g. engine room fans). Available in sizes from diam  $\varnothing 400 - \varnothing 1600$

### OPTIONAL EXECUTION

- Stainless steel / aisi316L execution
- Alum execution with stainless steel perforated plate inside

### SPECIAL DESIGN

- With external flanges for bolt connection
- Diffusor shape (e.g. for fan outlet)
- With integrated shut off damper
- Thick casing (e.g. for open deck mounting)
- Additionally strengthened (for high vertical load)
- Aerodynamiacally shaped core for high air speeds and low pressure drops.

### OPTIONS:

- With external (lose) inlet cone
- With wire mesh
- Counter flange



# CIRCULAR SILENCERS

Technical data

LD, LDC

LD = silencer without core

LDC = silencer with core

Silencers LD 1xD = silencer without core and length 1xDiameter

## Pressure drop

Silencer LD (without core): pressure drop is similar to duct pressure drop of same dimension  
(in case of free inlet/outlet of silencer inlet/outlet pressure drop must also be considered)

## Silencer attenuation values

size	model	Attenuation [dB]							
		63	125	250	500	1k	2k	4k	8k
250	LD 1xD	2	2	4	4	6	6	3	3
	LD 2xD	4	4	7	7	11	11	7	5
315	LD 1xD	1	2	4	4	6	5	4	3
	LD 2xD	2	5	8	8	12	9	7	5
400	LD 1xD	2	3	4	5	7	6	5	4
	LD 2xD	3	6	8	9	14	12	9	8
	LDC 1xD	2	4	6	8	10	9	7	6
	LDC 2xD	4	7	12	15	19	16	13	11
500	LD 1xD	2	3	4	5	7	5	4	3
	LD 2xD	4	6	8	9	14	10	8	7
	LDC 1xD	2	3	5	7	12	10	8	6
	LDC 2xD	3	6	9	13	22	20	15	11
630	LD 1xD	2	4	5	5	7	5	4	4
	LD 2xD	4	7	9	10	14	10	9	8
	LDC 1xD	2	3	4	6	11	9	7	5
	LDC 2xD	4	6	8	12	20	17	14	10
710	LD 1xD	2	4	5	5	7	5	4	4
	LD 2xD	4	7	9	10	14	9	8	7
	LDC 1xD	2	3	4	7	11	9	7	5
	LDC 2xD	4	6	8	13	20	16	13	9
800	LD 1xD	2	4	5	5	6	5	4	3
	LD 2xD	4	7	9	10	12	9	7	6
	LDC 1xD	2	3	4	6	11	9	6	5
	LDC 2xD	4	6	7	11	19	17	11	9
1000	LD 1xD	2	4	5	5	5	4	4	3
	LD 2xD	4	7	9	9	10	8	7	6
	LDC 1xD	2	3	5	6	10	8	6	4
	LDC 2xD	4	5	8	11	19	16	11	8
1250	LDC 1xD	2	3	5	5	9	7	5	4
	LDC 2xD	4	6	9	10	17	13	10	8

For other sizes, lengths, interpolate above values

**NYBORG AS**

Haugsethvn 72, N-6230 Sykkylven, Norway

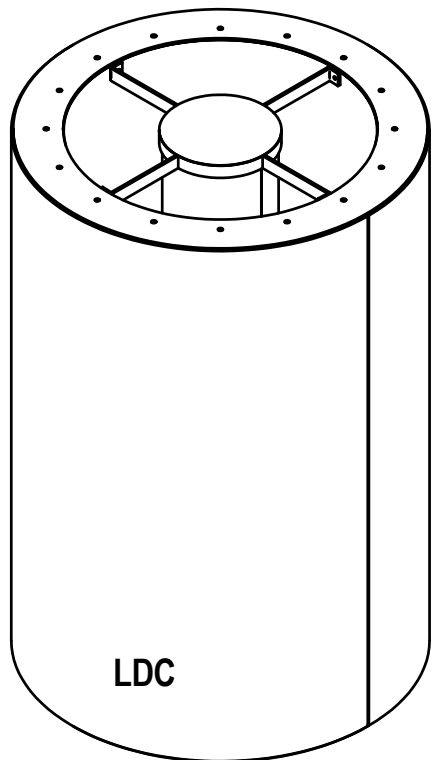
TEL +47 7025 4080 - FAX +47 7025 2908

office@nyborgfan.com - www.nyborgfan.com

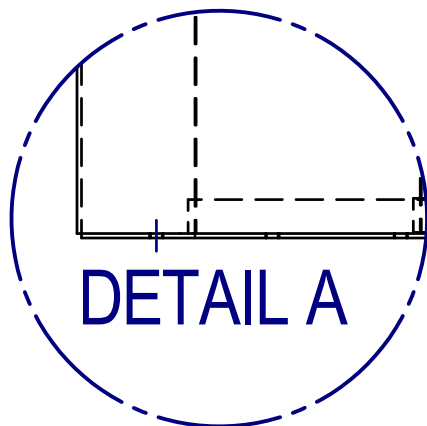
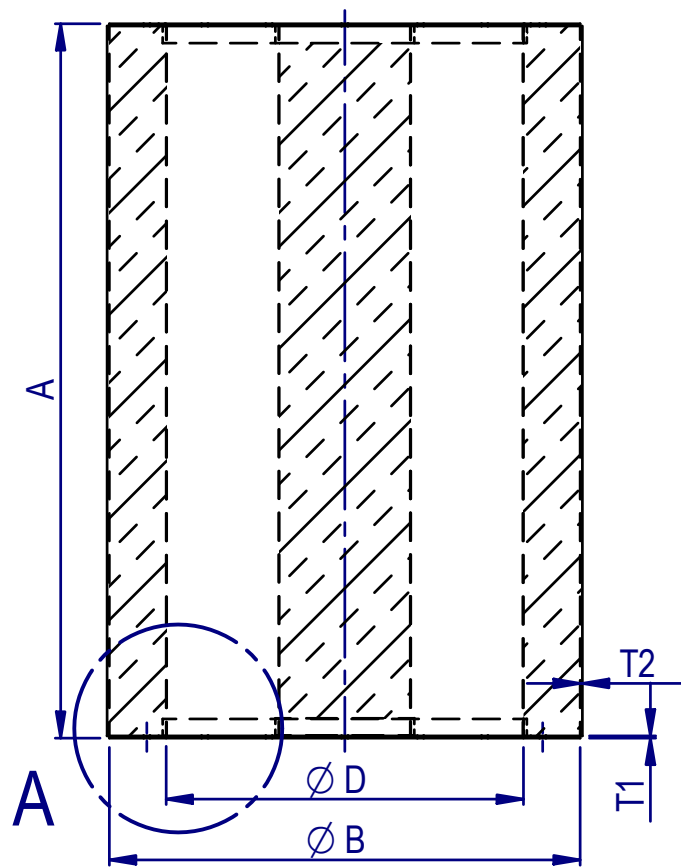


# SOUND ATTENUATOR

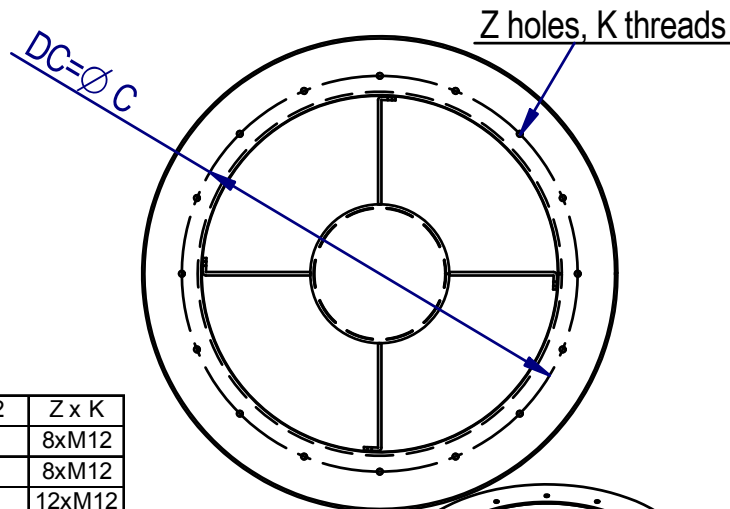
LD & LDC



LDC

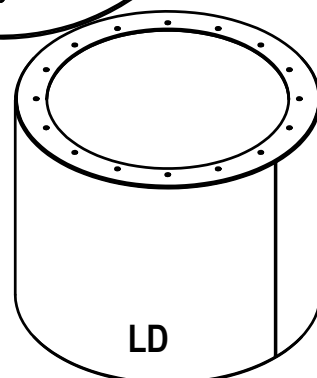


DETAIL A



Z holes, K threads

DC=Ø C



LD

LD	A=1D	A=2D	B	C	D	T1	T2	Z x K
315	315	730	515	360	315	4	3	8xM12
355	355	710	555	405	355	4	3	8xM12
400	400	800	600	460	400	4	3	12xM12
450	450	900	650	510	455	5	3	12xM12
500	500	1000	700	560	500	5	3	12xM12
630	630	1260	830	698	630	6	3	16xM12
710	710	1420	910	775	710	6	4	16xM12
800	800	1600	1000	870	800	6	4	16xM16
900	900	1800	1100	980	900	6	4	16xM16
1000	1000	2000	1200	1080	1000	8	4	20xM16
1120	1120	2240	1320	1200	1120	8	4	20xM16
1250	1250	2500	1450	1320	1250	8	5	24xM12
1400	1400	2800	1600	1490	1400	8	6	32xM16
1600	1600	3200	1800	1690	1600	8	6	32xM16

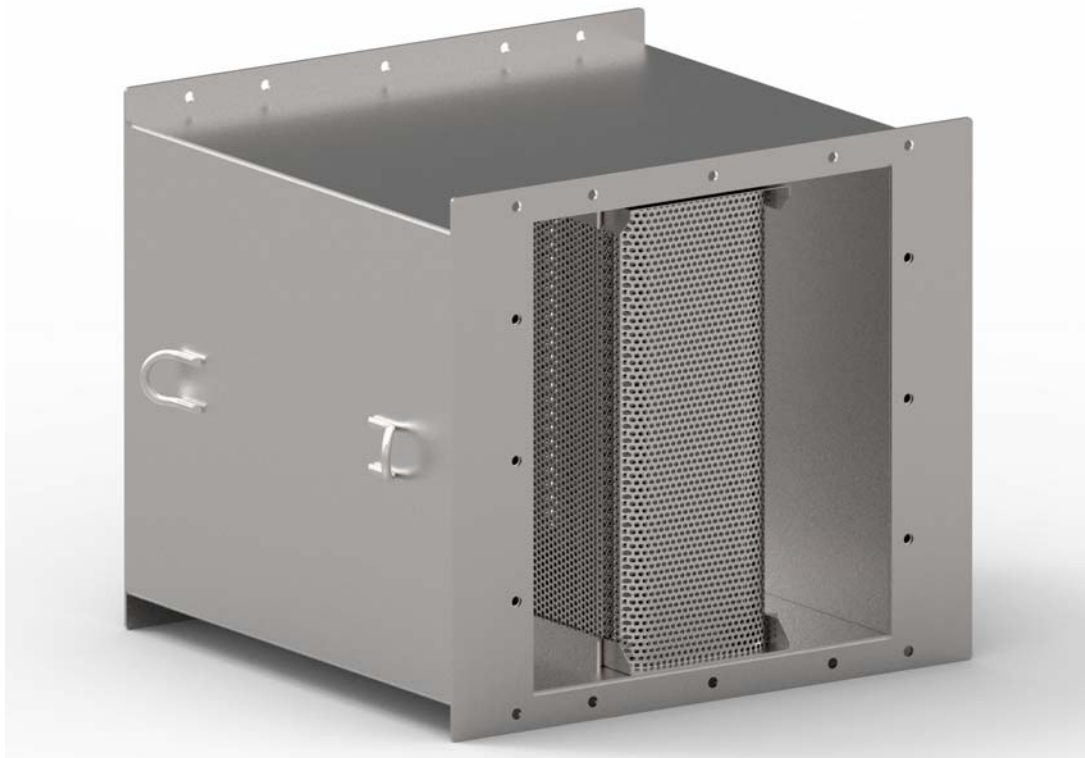
4-2151

**N Y B O R G A S**

R.Berge  
24/02-03

N-6230 SYKKYLVEN, NORWAY  
TEL +47 70 25 40 80 - FAX +47 70 25 29 08  
office@nyborgfan.com - www.nyborgfan.com

LD & LDC



## APPLICATIONS

Used for rectangular ducts, or for centrifugal fan outlet/inlets.

Used where high noise reductions is required.

## EXECUTION:

The Silencer is normally manufactured in mild steel, hot dip galvanized.

50-100 mm insulation material, type Rockwool, with perforated stainless steel plate inside.

## DESIGN

- In custom made sizes (height, width, length)
- Wider sizes typically with internal splitters/baffles for high noise attenuation.
- Casing stiffened to prevent noise generation/transmission.
- Can be made with different casing thickness to suit different ducting classes.
- Flange connection – iso 15138

**Type 1:** with side insulation (for lower pressure drop)

**Type 2:** without side insulation. Space saving, but higher pressure drop.

## OPTIONAL EXECUTION:

- Stainless steel / AISI316L execution (in specific thicknesses to suit ducting class)
- Alum execution with stainless steel perforated plate
- Without side insulation (external dimensions equal to duct dimensions)

## OPTIONS:

- With inspection hatch
- With external flange connection (instead of flange with internal threads)
- With wire mesh
- With supports for hanging/standing

## PERFORMANCE:

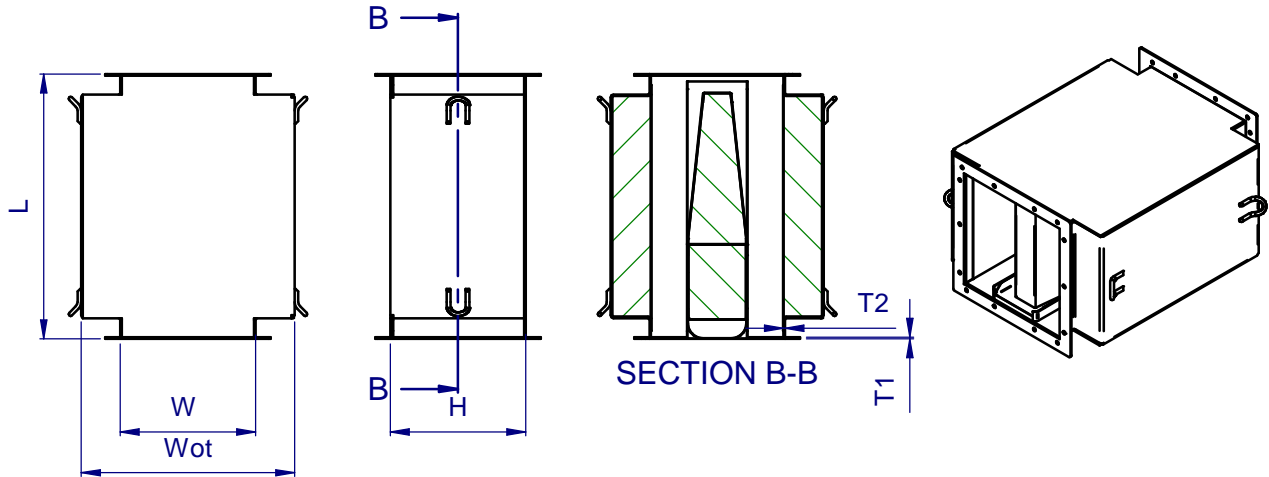
Attenuation, pressure drop, self generated noise is calculated from case to case



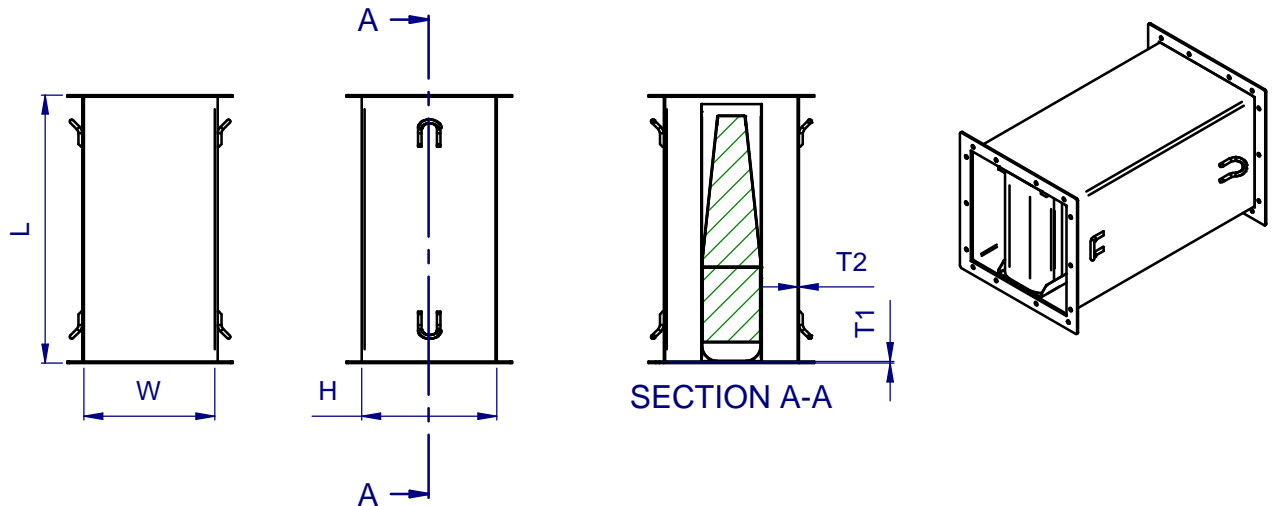
# RECTANGULAR SILENCERS

LDC

## TYPE 1



## TYPE 2



W	H	L	Wot	T1	T2	ZxK
315	315	630	529	4	3	14xM8
350	350	700	564	4	3	14xM8
400	400	800	614	4	3	14xM8
500	500	1000	714	5	3	18xM8
600	600	1200	814	6	3	18xM8
800	800	1600	1014	6	3	18xM10
1000	1000	2000	1214	8	3	22xM10
1250	1250	2500	1464	8	4	26xM10
1400	1400	2800	1614	8	4	30xM12
1600	1600	3200	1814	8	4	34xM12

### Comments:

1. The number of cores depends on the damper dimensions and noise damping features.
2. Bolting according to ISO15138, annex E is an option.

Draw. no.: 4-50021

Date: 2017-07-28  
Drawn: D. Śpiewak



N-6230 SYKKYLVEN, NORWAY  
TEL +47 70 25 40 80 - FAX +47 70 25 29 08  
office@nyborgfan.com - www.nyborgfan.com

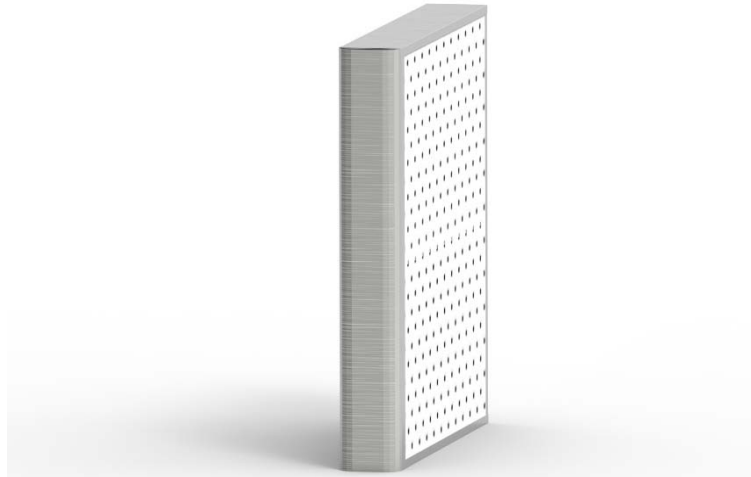
LDC



# NOISE Baffles

Technical data

**TYPE 1,  
TYPE 2**



### APPLICATIONS

Typically used behind air intakes / louvers where high noise attenuation is required. E.g. for engine room intakes.

Also for insertion into ducts or in front of air outlets. Well suitable for damping fan noise.

### EXECUTION / DESIGN

Frame for baffle made in stainless steel, insulation secured from migrating

**Type 1** – with perforated plates covering noise insulation material

**Type 2** – without perforated plates covering

To be made in custom made sizes. Thickness from 75 to 300 mm, Height, upto 3meter.

Can be delivered with fastening system for easy installation.

### SPECIAL DESIGN

Extra aerodynamically shaped for low pressure drop.

### PERFORMAMANCE

A very efficient way to damper noise (especially medium to high frequencies)

Damping of 25-35dB achievable with good design Attenuation, pressure drop and self generated noise calculated in case to case

### ATTENUATION VALUES, type 1

		Lenght frequency band, [Hz]								
		L [mm]	63	125	250	500	1k	2k	4k	8k
thickness 200 gap 100mm	500	3	4	9	20	26	23	16	11	
	1000	3	8	15	30	43	38	25	16	
	1500	5	12	21	47	51	50	32	19	
thickness 200 gap 150mm	500	2	3	8	14	17	15	10	7	
	1000	3	6	12	24	30	26	15	10	
	1500	4	9	18	36	43	36	22	12	
thickness 200 gap 200mm	500	2	2	6	12	13	11	7	6	
	1000	2	5	10	21	24	19	12	8	
	1500	3	7	16	30	33	25	14	10	

### ATTENUATION VALUES, type 2

		Lenght frequency band, [Hz]								
		L [mm]	63	125	250	500	1k	2k	4k	8k
thickness 200 gap 100mm	500	2	5	12	13	15	12	10	8	
	1000	5	9	21	22	27	21	13	10	
	1500	6	13	29	30	36	27	17	15	
thickness 200 gap 150mm	500	2	3	8	10	11	8	7	5	
	1000	3	6	16	16	16	13	9	8	
	1500	4	10	22	22	21	17	11	8	
thickness 200 gap 200mm	500	1	3	7	7	7	6	5	3	
	1000	1	7	12	12	12	9	8	6	
	1500	3	10	17	17	15	12	9	7	

For other lenghts, gaps between baffles, interpolate for approximate attenuation values

**NYBORG AS**

Haugsethvn 72, N-6230 Sykkylven, Norway

TEL +47 7025 4080 - FAX +47 7025 2908

office@nyborgfan.com - www.nyborgfan.com