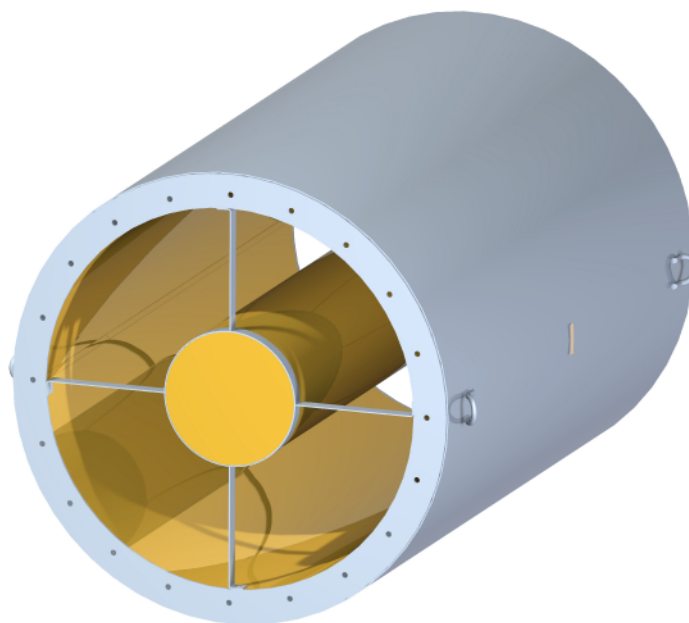




## TŁUMIK



### ZASTOSOWANIE

Wytrzymałe tłumiki do zastosowań okrętowych.

#### LD

Okrągły, wysokowydajny tłumik do podłączenia kołnierzewego  
Dostępny w rozmiarach od średnicy  $\varnothing 315$ - $\varnothing 1600$  . długości 1D lub 2D  
(długość = 1 x średnica).

#### LDC

Okrągły, wysokowydajny tłumik z rdzeniem do podłączenia kołnierzewego, w miejscach, w których konieczne jest dodatkowe tłumienie.  
Dostępny w rozmiarach od średnicy  $\varnothing 630$  - $\varnothing 1600$ .  
długość 1D lub 2D (długość = 1 x średnica).

Do montażu bezpośrednio do wentylatorów osiowych lub w przewodzie wentylacyjnym

### KONSTRUKCJA

Dostępne są również rozwiązania na specjalne zamówienie w celu realizacji specyfikacji klientów

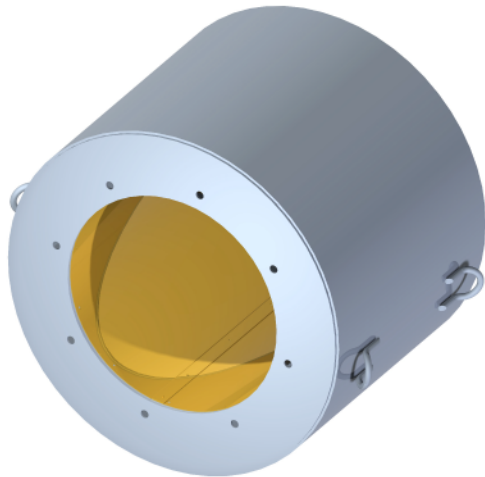
### WYKONANIE

Tłumik jest zwykle produkowany z ocynkowanej ognioowo stali okrętowej klasy A.  
100 mm izolacja z wełny mineralnej (Rockwool) wewnątrz z perforowaną płytą nierdzewną, AISI 316L .

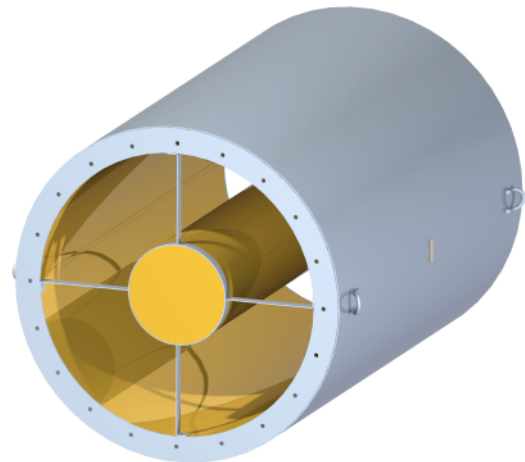


## SILENCERS

LD



LDC (with core)



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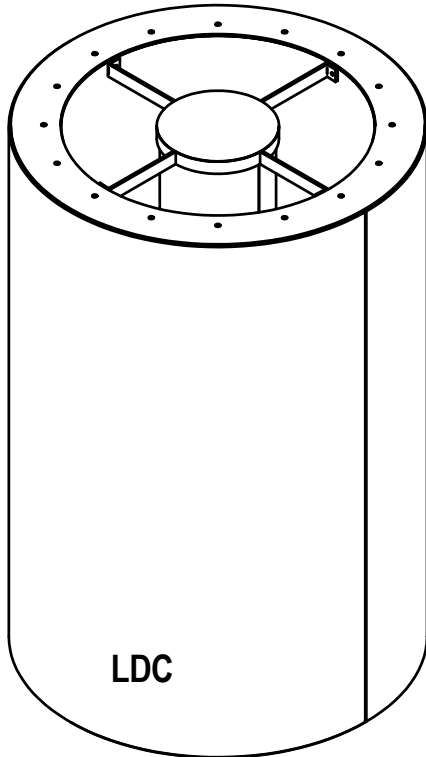


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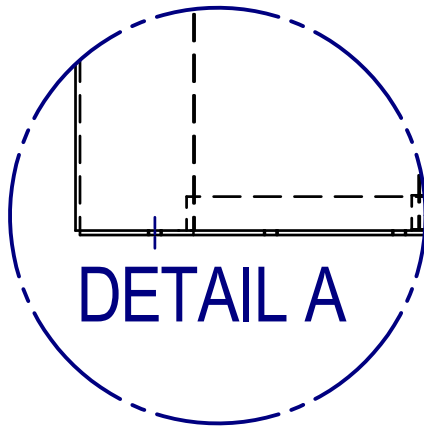
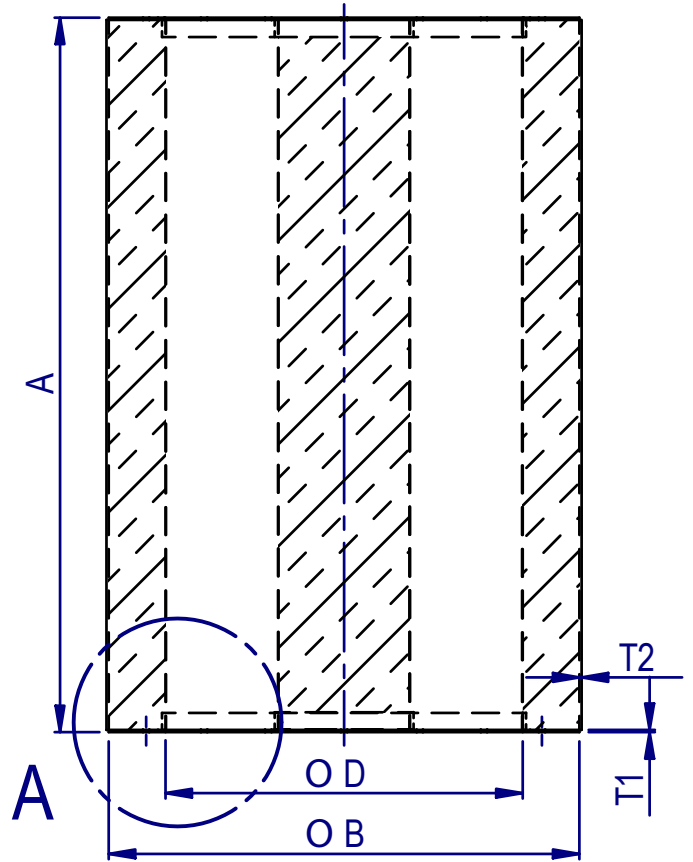


# SOUND ATTENUATOR

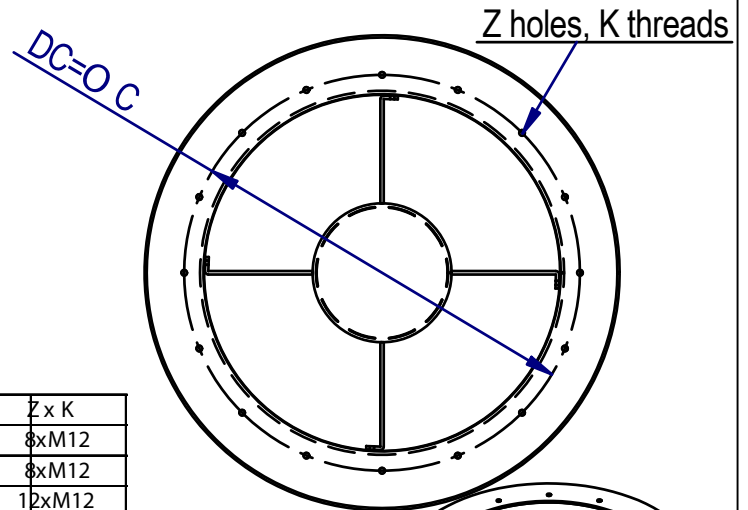
## LD & LDC



LDC



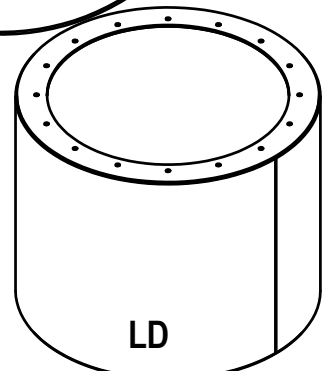
DETAIL A



Z holes, K threads

DC=OC

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



LD

**4-2151**  
R.Berge  
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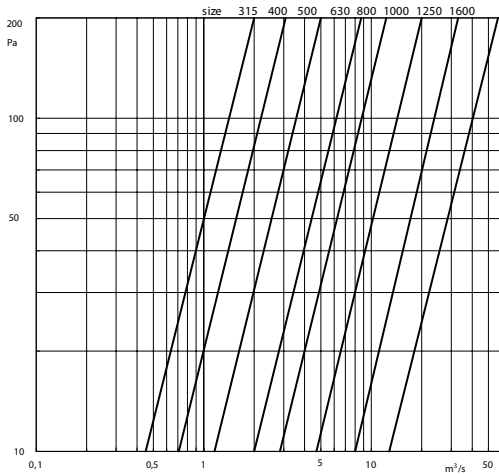
## LD & LDC



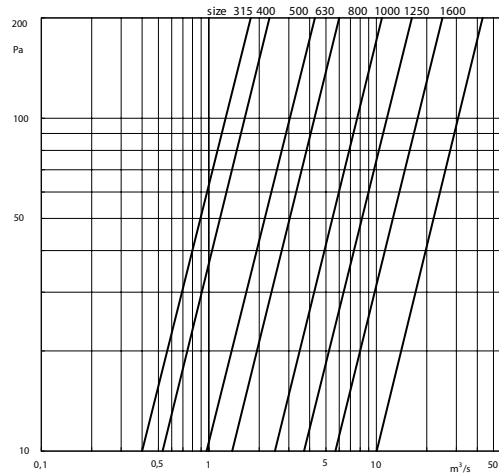
**TECHNICAL DATA**

The pressure for LD (without core) equals the pressure drop for ductwork with equal length. The pressure drop for LDC (with core) se below

**Air flow vs Pressure drop, Model LDC 1D**



**Air flow vs Pressure drop, Model LDC 2D**



**Sound attenuation**

For LDC the attenuation will depend on the blade angle of the axial fan. For LD the blade angle is ignorable.

**Silencers in duct**

**Static attenuation**

Size	Model	Attenuation dB							
		63	125	250	500	1k	2k	4k	8k
315	LD 1D	1	2	4	7	11	9	8	7
	LD 2D	2	4	7	14	16	14	12	11
	LDC 1D	3	5	7	14	19	16	13	12
	LDC 2D	4	8	14	22	32	28	20	19
400	LD 1D	1	3	5	7	10	9	7	7
	LD 2D	3	5	9	14	14	13	11	10
	LDC 1D	1	5	7	17	20	17	13	12
	LDC 2D	4	9	14	25	30	28	19	17
500	LD 1D	1	3	6	8	10	9	7	7
	LD 2D	3	6	12	16	16	13	11	10
	LDC 1D	3	6	10	20	29	21	17	14
	LDC 2D	5	10	17	30	38	35	26	20
630	LD 1D	1	2	5	8	9	8	6	6
	LD 2D	2	4	8	13	14	12	9	9
	LDC 1D	3	6	11	18	23	21	15	14
	LDC 2D	5	10	20	33	40	36	24	19
800	LD 1D	0	1	3	8	8	7	5	4
	LD 2D	0	2	6	13	13	11	8	7
	LDC 1D	3	6	12	18	23	21	15	13
	LDC 2D	5	11	22	35	41	36	22	17
1000	LD 1D	0	2	4	8	8	6	4	3
	LD 2D	1	3	8	13	13	10	7	6
	LDC 1D	3	6	12	20	24	19	13	12
	LDC 2D	5	12	23	38	46	35	21	15
1250	LD 1D	0	2	6	8	7	5	3	3
	LD 2D	1	4	10	13	12	7	5	5
	LDC 1D	3	6	13	21	23	14	10	9
	LDC 2D	6	12	26	41	44	30	16	13
1600	LD 1D	1	3	7	8	6	5	3	3
	LD 2D	2	6	12	13	11	7	5	4
	LDC 1D	4	7	14	20	22	12	8	8
	LDC 2D	6	13	28	38	42	26	12	10

Silencer mounted directly on axialfan in duct

Dynamical attenuation

Blade angle small refers to 20-25 °, medium to 30-35 ° and big to 40-45 °

Size	Model	Blade angle	Attenuation dB								
			63	125	250	500	1k	2k	4k	8k	
315 355 400 450 500	LD 1D	All	2	4	6	10	14	10	7	8	
		LDC 1D	Small	4	6	8	13	20	21	18	16
			Medium	4	6	8	12	18	19	16	14
			Big	4	6	8	11	13	16	12	11
	LD 2D	Small	4	7	12	18	22	17	13	13	
		Medium	4	7	11	17	21	17	13	12	
		Big	4	7	10	15	19	16	12	10	
	LDC 2D	Small	7	10	15	24	32	35	30	28	
		Medium	7	10	15	21	26	26	24	22	
		Big	7	10	15	16	15	17	13	13	
	630 710 800 900	LD 1D	All	3	4	8	14	14	9	8	7
			LDC 1D	Small	4	6	9	17	26	21	18
		Medium	4	6	9	17	23	20	18	11	
		Big	4	6	9	16	17	16	14	11	
LD 2D		Small	6	8	14	23	24	15	13	10	
		Medium	6	8	13	22	22	14	13	9	
		Big	6	8	12	20	18	13	11	9	
LDC 2D		Small	8	11	16	30	39	35	32	22	
		Medium	8	11	16	27	32	32	29	19	
		Big	8	11	16	24	23	23	24	17	
1000 1120 1250 1400		LD 1D	All	3	4	9	14	12	8	7	7
			LDC 1D	Small	4	6	11	22	21	16	14
		Medium	4	6	11	17	17	14	12	11	
		Big	4	6	11	17	17	14	12	11	
	LD 2D	Small	6	8	14	22	20	13	12	10	
		Medium	6	8	13	21	18	12	11	10	
		Star	6	8	12	19	15	11	10	9	
	LDC 2D	Small	8	11	19	20	32	30	24	17	
		Medium	8	11	19	26	27	26	22	17	
		Big	8	11	19	21	20	22	20	16	
	1600	LD 1D	All	4	5	10	14	11		6	6
			LDC 1D	Small	5	7	12	21	20	14	12
		Medium	5	7	12	19	18	13	11	9	
		Big	5	7	12	15	16	12	10	8	
LD 2D		Small	8	9	15	20	19	12	11	9	
		Medium	8	9	14	20	17	11	10	9	
		Big	8	9	13	19	14	10	9	8	
LDC 2D		Small	10	14	22	28	31	29	18	15	
		Medium	10	14	22	25	27	25	16	15	
		Big	10	14	22	21	21	21	15	14	



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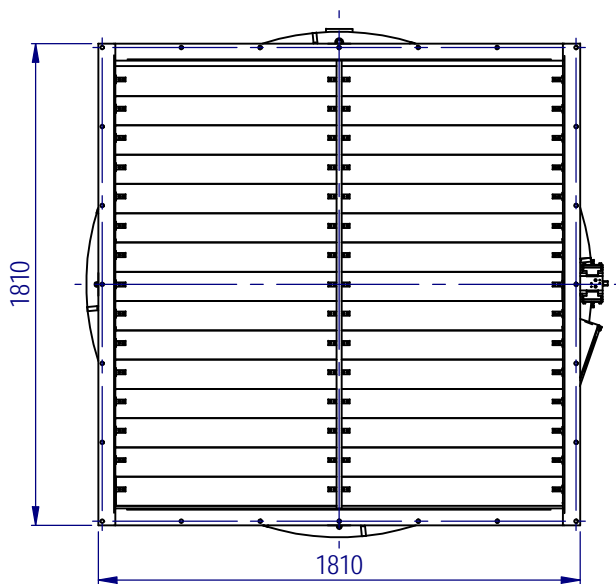
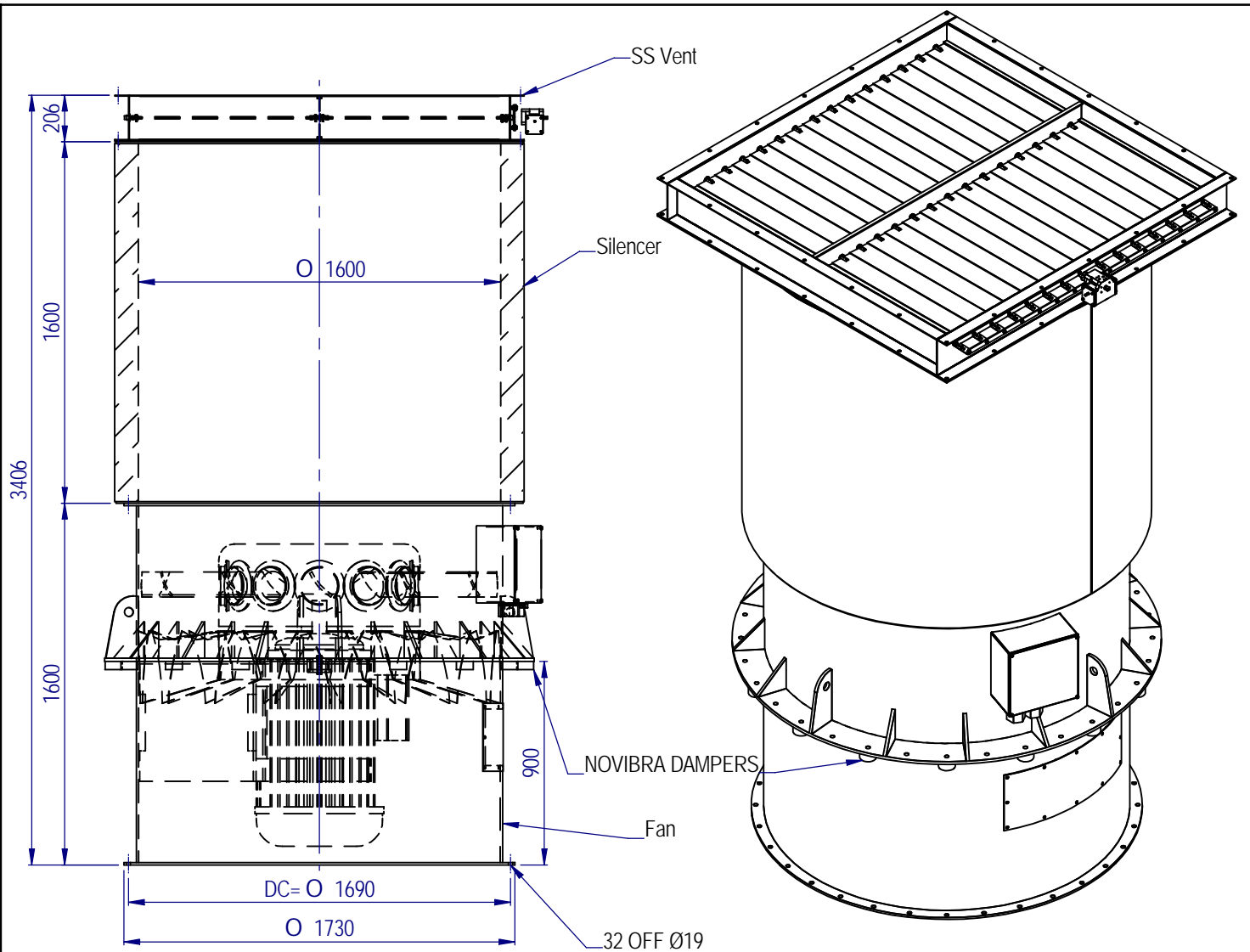
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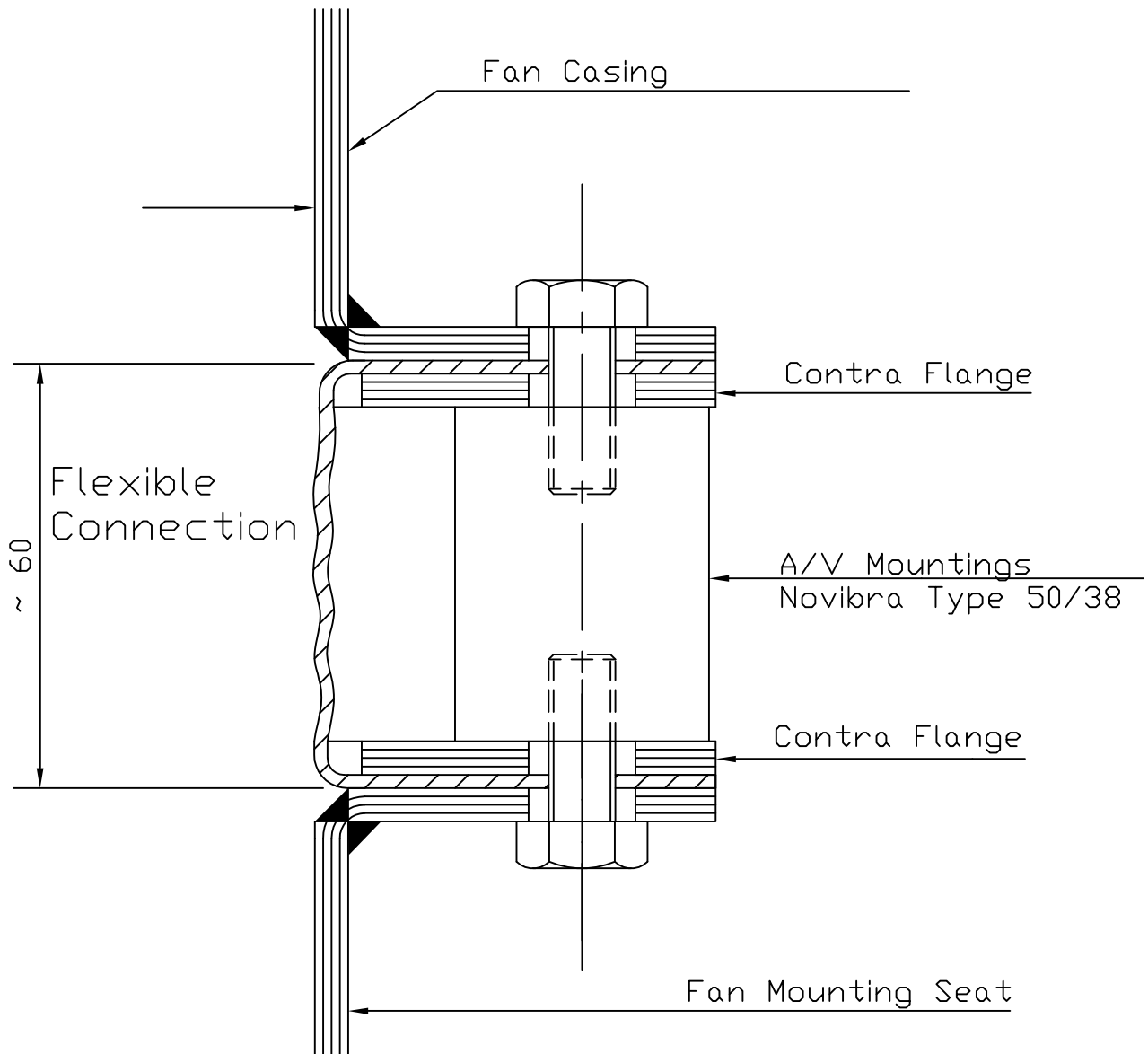
Date	14.03.02	Konst./Teknisk	F. Østro	Godkendt	E. Nyborg	Målestok	1:20	<b>NYBORG AS</b> N-6230 SYKKYLVEN
Gen. Arr. Drawing		MPV 1600 D1K / Silencer / SS Vent		Hervisning:		Estatist av:		
Hervisning:		Beregning:				3-6439		





# RESILIENT MOUNTINGS PRINCIPLE SKETCH

MPV  
A1K



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