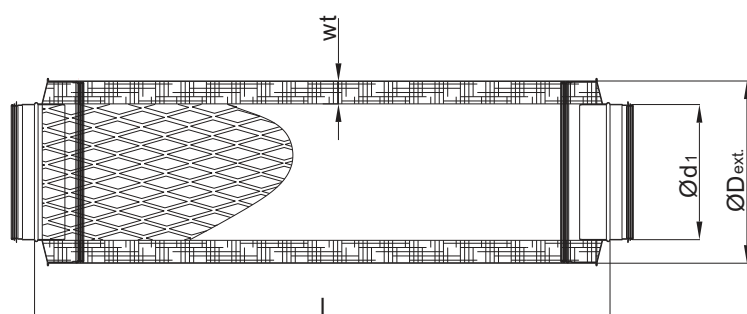


Noise silencer TOC



DESCRIPTION:

TOC silencer is designed for mounting in Spiro and B1 type installations. The attenuator housing is made of zinc-coated steel sheet. Mineral wool protected with perforated sheet is used as sound absorbing material. In a standard version, TOC attenuators are equipped with gaskets.

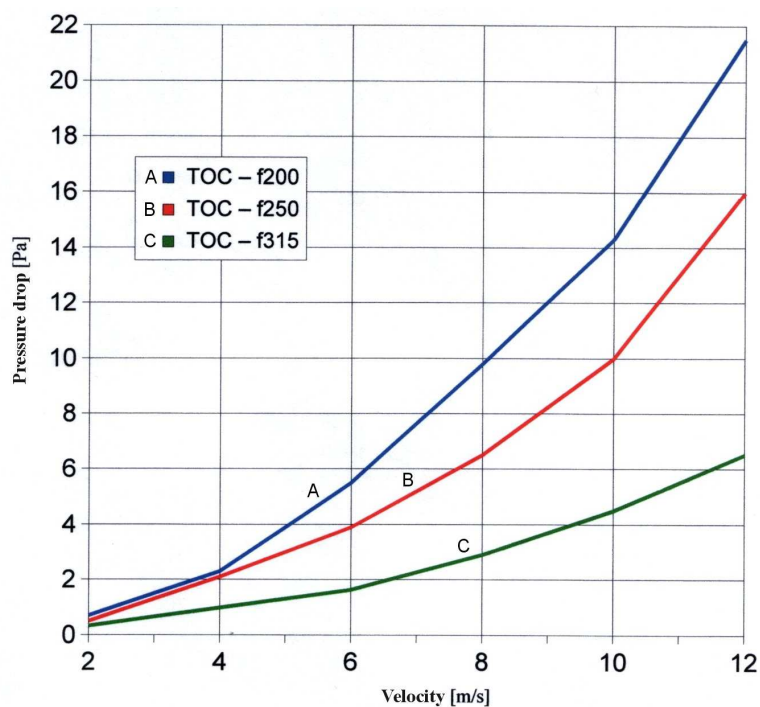
wt - attenuating layer.
Glass wool insulation.

SYMBOL:

TOC - Ød₁ / l / i / mat.

Type _____
Diameter d₁ [mm] _____
Length [mm] _____
600, 900 or 1200
Insulation [mm] _____
50 or 100
Material _____
Zinc coated sheet - no marking

Fig. 21. Example hydraulic resistances of TOC attenuators, length $l = 900$ mm.



Noise silencer TOC

Table 31. Range of TOC silencers with 50 mm insulation.

Type	Ød1 [mm]	Ø D ext. [mm]	Insulation thickness [mm]	L [mm]	Weight * [mm]
TOC Ø 80/50	78	180	50	300/600/900/1200	1,7/2,8/3,8/4,8
TOC Ø 100/50	98	200	50	300/600/900/1200	2,0/3,2/4,3/5,5
TOC Ø 125/50	123	224	50	300/600/900/1200	2,3/3,7/5,0/6,3
TOC Ø 140/50	138	250	50	300/600/900/1200	2,6/4,1/5,6/7,0
TOC Ø 150/50	148	250	50	300/600/900/1200	2,6/4,1/5,6/7,1
TOC Ø 160/50	158	250	50	300/600/900/1200	2,8/4,3/5,9/7,4
TOC Ø 180/50	178	280	50	300/600/900/1200	3,2/4,9/6,6/8,3
TOC Ø 200/50	198	300	50	300/600/900/1200	3,5/5,3/7,2/9,0
TOC Ø 224/50	222	355	50	300/600/900/1200	3,6/5,6/7,5/9,5
TOC Ø 250/50	248	400	50	300/600/900/1200	4,4/6,6/8,8/11,0
TOC Ø 280/50	278	400	50	600/900/1200	7,5/10,0/12,5
TOC Ø 300/50	298	400	50	600/900/1200	7,6/10,1/12,6
TOC Ø 315/50	313	400	50	600/900/1200	8,1/10,6/13,1
TOC Ø 355/50	353	450	50	600/900/1200	9,3/12,5/15,7
TOC Ø 400/50	398	500	50	600/900/1200	11,2/14,7/18,2
TOC Ø 450/50	448	560	50	600/900/1200	12,9/16,8/20,8
TOC Ø 500/50	498	600	50	600/900/1200	13,8/18,0/22,2
TOC Ø 560/50	558	710	50	600/900/1200	19,4/25,1/30,8
TOC Ø 600/50	598	710	50	600/900/1200	19,3/25,1/30,9
TOC Ø 630/50	628	710	50	600/900/1200	19,3/25,1/30,8

Table 32. Range of TOC silencers with 100 mm insulation.

Type	Ød1 [mm]	Ø D ext. [mm]	Insulation thickness [mm]	L [mm]	Weight * [mm]
TOC Ø 80/100	78	280	100	300/600/900/1200	3,3/5,2/7,1/9,0
TOC Ø 100/100	98	300	100	300/600/900/1200	3,6/5,7/7,6/9,8
TOC Ø 125/100	123	315	100	300/600/900/1200	3,9/6,1/8,4/10,6
TOC Ø 140/100	138	355	100	300/600/900/1200	4,4/6,6/9,3/11,8
TOC Ø 150/100	148	355	100	300/600/900/1200	4,4/7,0/9,5/12,0
TOC Ø 160/100	158	355	100	300/600/900/1200	4,5/7,1/9,6/12,2
TOC Ø 180/100	178	400	100	300/600/900/1200	5,3/8,1/10,9/13,6
TOC Ø 200/100	198	400	100	300/600/900/1200	5,4/8,3/11,2/14,1
TOC Ø 224/100	222	400	100	300/600/900/1200	5,5/8,5/11,5/14,5
TOC Ø 250/100	248	450	100	300/600/900/1200	6,6/10,5/14,2/17,8
TOC Ø 280/100	278	500	100	600/900/1200	12,0/16,0/20,0
TOC Ø 300/100	298	500	100	600/900/1200	12,1/16,1/20,2
TOC Ø 315/100	313	500	100	600/900/1200	12,2/16,3/20,4
TOC Ø 355/100	353	560	100	600/900/1200	13,8/18,4/23,0
TOC Ø 400/100	398	600	100	600/900/1200	15,2/20,2/25,1
TOC Ø 450/100	448	630	100	600/900/1200	16,5/21,8/27,1
TOC Ø 500/100	498	710	100	600/900/1200	20,0/25,9/31,8
TOC Ø 560/100	558	800	100	600/900/1200	22,8/29,4/36,0
TOC Ø 600/100	598	800	100	600/900/1200	23,0/29,7/36,4
TOC Ø 630/100	628	800	100	600/900/1200	23,1/30,0/36,8

* Theoretic calculation of weight.

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Noise silencer TOC

Table 33. Acoustic characteristics of TOC with 50 mm attenuating layer.

Diameter Ø d ₁ [mm]	Diameter Ø D _{zew} [mm]	l [mm]	Acoustic insulation thickness [mm]	Sound attenuation [dB] for frequency [Hz]							
				63	125	250	500	1000	2000	4000	8000
80	180	300	50	5	6	14	23	35	27	24	19
80	180	600	50	5	7	17	29	50	32	27	21
80	180	900	50	6	9	19	44	50	48	34	26
80	180	1200	50	8	11	24	45	50	50	36	26
100	200	300	50	4	5	14	20	30	22	20	17
100	200	600	50	4	5	15	27	48	29	25	18
100	200	900	50	6	8	17	36	50	39	31	23
100	200	1200	50	7	9	21	39	50	40	27	24
125	225	300	50	4	5	12	17	19	15	18	15
125	225	600	50	4	5	12	18	30	19	19	16
125	225	900	50	5	7	14	32	45	38	30	21
125	225	1200	50	6	8	15	36	49	38	23	22
160	250	300	50	3	4	10	13	15	14	12	11
160	250	600	50	3	4	12	20	28	25	21	15
160	250	900	50	4	6	14	29	43	35	28	19
160	250	1200	50	6	8	17	34	47	38	36	23
200	300	300	50	2	3	6	9	15	13	9	7
200	300	600	50	2	4	7	14	19	17	13	9
200	300	900	50	3	6	11	25	40	29	19	16
200	300	1200	50	4	7	13	28	48	34	23	18
250	355	300	50	1	2	4	8	14	10	7	6
250	355	600	50	2	3	6	12	15	11	9	7
250	355	900	50	2	4	9	17	30	23	18	16
250	355	1200	50	2	4	11	24	45	26	22	17
315	400	600	50	1	2	6	11	14	9	5	4
315	400	900	50	1	3	7	14	26	20	14	12
315	400	1200	50	2	3	7	18	21	23	15	14
355	450	600	50	1	2	6	11	14	9	5	4
355	450	900	50	1	3	7	14	26	20	14	12
355	450	1200	50	2	3	7	18	31	23	15	14

Noise silencer TOC

Table 34. Acoustic characteristics of TOC with 100mm attenuating layer.

Diameter $\varnothing d_1$ [mm]	Diameter $\varnothing D_{zew}$ [mm]	l [mm]	Acoustic insulation thickness [mm]	Sound attenuation [dB] for frequency [Hz]							
				63	125	250	500	1000	2000	4000	8000
80	280	300	100	5	11	20	38	43	39	26	23
80	280	600	100	7	11	25	50	50	50	29	27
80	280	900	100	9	18	28	50	50	50	36	29
80	280	1200	100	10	20	32	50	50	50	46	40
100	300	300	100	5	10	18	35	47	38	20	19
100	300	600	100	6	14	22	44	50	43	25	23
100	300	900	100	8	16	25	47	50	49	32	26
100	300	1200	100	7	18	29	48	50	50	43	27
125	315	300	100	5	8	16	30	44	33	18	16
125	315	600	100	6	12	20	41	50	40	23	21
125	315	900	100	7	14	22	43	50	44	26	25
125	315	1200	100	7	16	26	45	50	46	26	24
160	355	300	100	4	6	12	19	20	19	18	17
160	355	600	100	5	8	14	26	34	29	23	21
160	355	900	100	5	10	16	33	45	31	24	23
160	355	1200	100	6	12	19	38	50	39	25	24
200	400	600	100	5	8	14	26	34	29	23	21
200	400	900	100	5	10	15	33	45	31	24	23
200	400	1200	100	5	12	19	36	49	35	25	24
250	450	600	100	3	4	10	15	21	16	13	8
250	450	900	100	4	7	14	26	33	21	17	12
250	450	1200	100	4	8	19	35	45	32	20	14
315	500	600	100	2	3	8	13	18	12	11	6
315	500	900	100	3	5	13	25	25	19	14	11
315	500	1200	100	4	8	17	28	33	23	14	13
355	560	600	100	1	2	6	11	14	9	5	4
355	560	900	100	1	3	7	14	26	20	14	12
355	560	1200	100	2	3	7	18	31	23	15	14
400	600	900	100	1	3	7	14	23	18	12	10
400	600	1200	100	2	5	12	25	28	21	13	11
500	710	900	100	1	2	6	13	18	15	10	8
500	710	1200	100	2	4	10	16	22	18	11	8
630	800	900	100	0	1	5	8	12	10	7	5
630	800	1200	100	1	2	7	12	16	14	9	6