

TL-CN

CORE SILENCER



Intended use:

The TL-CN duct silencers for ventilation ducts are designed for attenuating noise transferred by ducts in ventilation systems (diameters ranging from Ø630 to Ø1,250) or in smoke extraction installations with the following fire-resistance rating: E₆₀₀120(h₀)S1500 single.

Design

The TL-CN duct silencers for ventilation ducts with an attenuating core are available in diameters ranging from Ø355 to Ø1250. The maximum silencer length is 1450 mm.

The TL-CN silencers have a body made of galvanised steel sheet. The body is finished with covers made of galvanised steel sheet that feature rivet nuts for flange connections. The silencer core is made of perforated galvanised steel sheet that is 1.0 mm thick. It is also finished with covers (tapered on the front side and flat on the rear side). The silencer is filled with rock mineral wool that is protected with fibre glass and perforated galvanised sheet. The silencers can have a different rivet nut layout.

Application

The tightness of the standard TL-CN silencer housing is classed as C according to EN 12237, which allows for using these silencers in ventilation systems with pressure ranging from -750 to 2000 Pa. The recommended airflow speed for TL-CN silencers is up to 15 m/s. The TL-CN silencer, when used in general ventilation systems, can be mounted in vertical or horizontal position.

Within the diameter range of 630 to 1250 the silencers have the following fire resistance rating: E₆₀₀120(h₀)S1500 single, which makes it possible to use them in single-zone smoke-exhaust ducts, mounted horizontally. The silencers can be mounted in a horizontal or vertical position when used with SEF(R) or SEF(V) fans.

Dimensions

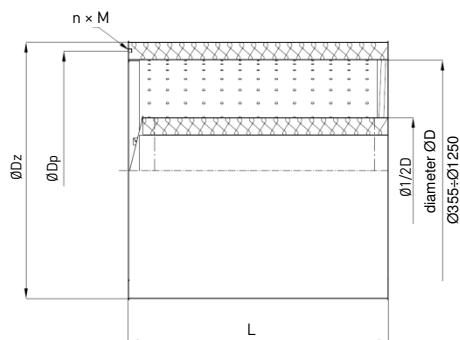


Figure 1. TL-CN silencer dimensions.

TL-CN silencer selection

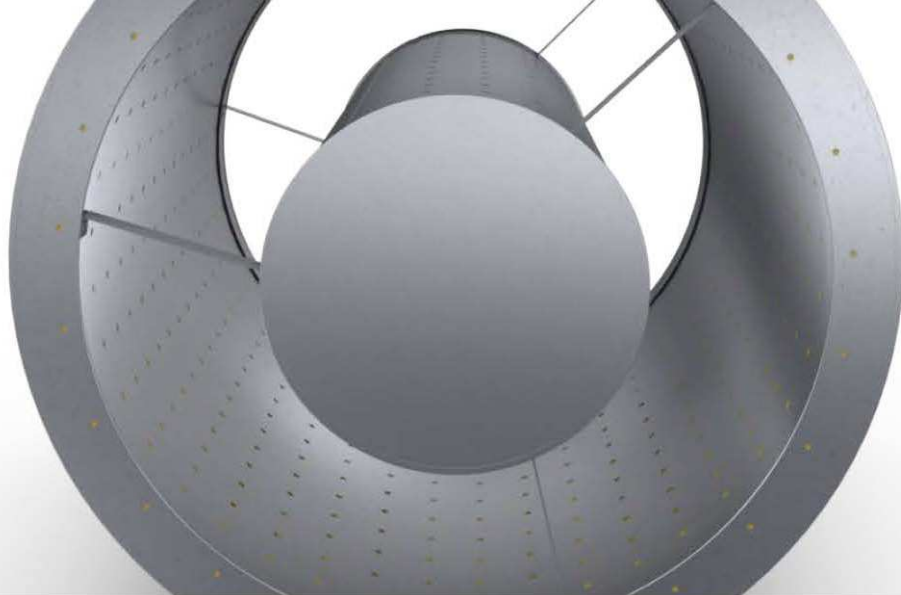
Table 1. Dimensions and empty weight

ØD [mm]	ØDz [mm]	TL-CN-S (Eurovent 1/2)		TL-CN-A TL-CN-iSWAY		Weight approx. [kg]		
		ØDp [mm]	n × M	ØDp [mm]	n × M	L=500 [mm]	L=1000 [mm]	L=1450 [mm]
355	550	395	8× M8	-	-	16	28	39
400	600	450	8× M10	-	-	18	30	43
450	650	500	8× M10	-	-	19	33	47
500	700	560	12× M10	-	-	21	36	51
560	760	620	12× M10	610	12× M10	23	40	56
630	830	690	12× M10	690	12× M10	26	44	62
710	910	770	16× M10	-	-	28	48	68
800	1000	860	16× M10	850	12× M10	31	53	75
900	1100	970	16× M12	-	-	35	59	84
1000	1200	1070	16× M12	1050	12× M10	38	65	92
1120	1320	1190	16× M12	-	-	42	72	102
1250	1450	1320	20× M12	-	-	47	80	113

Table 2. Pressure loss depending on velocity, flow and silencer length. Internal noise

Diameter	V [m/s]	Silencer length [mm]					LWA [dB(A)]
		500	750	1000	1250	1450	
355	5	22	24	26	27	29	42
	7	40	43	47	51	54	48
	10	82	89	97	104	111	59
	12	121	131	142	153	163	61
	15	143	156	169	181	194	64
400	5	20	22	24	26	28	43
	7	39	43	46	49	53	49
	10	78	85	92	99	106	59
	12	114	124	134	144	154	62
	15	137	149	161	173	185	65
450	5	20	21	23	25	26	43
	7	37	41	44	47	51	50
	10	75	81	88	95	101	59
	12	109	118	128	138	147	63
	15	131	142	154	165	177	66

AIR FLOW CONTROL AND DISTRIBUTION



Diameter	V [m/s]	Silencer length [mm]					LWA [dB(A)]
		500	750	1000	1250	1450	
500	5	20	21	23	25	26	43
	7	36	39	42	45	48	50
	10	73	80	86	92	99	59
	12	105	115	124	133	143	63
	15	126	138	149	160	171	66
560	5	18	19	21	23	24	44
	7	36	39	42	45	48	50
	10	71	77	83	89	95	59
	12	104	113	122	131	140	63
	15	124	135	146	157	168	66
630	5	17	19	20	22	23	44
	7	32	35	38	41	44	50
	10	69	75	81	87	93	59
	12	98	106	115	124	132	64
	15	117	128	138	148	159	68
710	5	17	19	20	21	23	44
	7	33	35	38	41	43	51
	10	65	71	76	81	87	59
	12	95	103	111	119	127	64
	15	115	124	133	143	152	68
800	5	18	19	20	21	22	44
	7	33	35	37	39	41	51
	10	66	71	75	80	84	60
	12	95	102	108	114	121	64
	15	114	122	130	137	145	68
900	5	16	17	18	19	20	44
	7	31	33	35	37	39	51
	10	64	68	72	76	80	60
	12	95	101	107	113	119	65
	15	114	121	128	135	143	68
1000	5	16	17	18	19	20	44
	7	31	33	35	37	39	51
	10	64	68	72	76	80	61
	12	93	98	104	110	115	65
	15	111	118	125	132	139	68

Diameter	V [m/s]	Silencer length [mm]					LWA [dB(A)]
		500	750	1000	1250	1450	
1120	5	15	17	18	19	21	45
	7	29	31	34	37	39	51
	10	61	67	72	77	83	61
	12	87	94	102	110	117	65
	15	104	113	122	132	141	68
1250	5	14	16	17	18	20	45
	7	29	31	34	37	39	51
	10	60	65	70	75	81	62
	12	87	94	102	110	117	65
	15	104	113	122	132	141	68

Table 3. Attenuation values in dB for individual frequency bands

Diameter	L	Frequency Bands [Hz]							
		63	125	250	500	1000	2000	4000	8000
355	500	2	4	9	15	20	19	18	16
	750	3	6	12	21	31	31	26	20
	1000	3	8	14	26	42	42	34	24
	1250	5	10	16	31	46	46	40	27
	1450	6	11	18	35	50	50	46	30
400	500	1	4	8	14	18	17	16	14
	750	2	6	11	20	29	28	23	18
	1000	3	7	13	25	40	38	29	21
	1250	5	9	15	29	45	44	35	24
	1450	6	10	17	33	50	50	40	26
450	500	1	4	7	14	16	16	14	12
	750	2	6	10	19	28	26	20	15
	1000	3	7	12	24	39	35	26	18
	1250	4	8	14	28	45	43	31	21
	1450	5	9	16	31	50	50	36	23
500	500	1	3	7	13	16	15	13	11
	750	2	5	10	18	27	24	19	14
	1000	2	6	12	23	38	33	24	17
	1250	4	8	14	27	44	41	29	19
	1450	5	9	16	30	50	48	33	21

Diameter	L	Frequency Bands [Hz]							
		63	125	250	500	1000	2000	4000	8000
560	500	1	3	6	13	15	14	11	10
	750	2	5	9	18	26	23	16	13
	1000	2	6	11	23	36	31	21	15
	1250	3	7	13	27	43	38	25	17
	1450	4	8	15	30	50	44	29	19
630	500	1	3	6	12	15	13	11	8
	750	2	4	9	17	24	21	15	11
	1000	2	5	11	22	33	29	19	13
	1250	3	7	13	25	41	36	23	15
	1450	4	8	14	28	49	43	26	16
710	500	1	3	5	11	13	13	10	8
	750	2	4	8	16	23	20	14	10
	1,000	2	5	10	21	33	27	17	12
	1,250	3	6	12	25	41	34	20	13
	1,450	4	7	14	28	48	40	23	14
800	500	1	2	5	11	12	11	7	7
	750	2	4	8	15	17	18	11	9
	1000	2	5	10	19	22	24	14	10
	1250	3	6	12	23	35	31	17	11
	1450	3	6	13	26	47	37	20	12

Diameter	L	Frequency Bands [Hz]							
		63	125	250	500	1000	2000	4000	8000
900	500	1	2	5	11	12	10	6	6
	750	2	3	7	15	22	16	10	8
	1000	2	4	9	18	31	22	13	9
	1250	3	5	11	21	38	28	16	10
	1450	3	6	12	23	45	34	18	11
1000	500	1	2	5	10	12	10	6	5
	750	2	3	7	14	21	16	9	7
	1000	2	4	9	18	30	21	12	8
	1250	3	5	11	21	37	27	14	9
	1450	3	6	12	23	44	32	16	10
1120	500	1	2	5	10	11	9	5	4
	750	2	3	7	14	20	15	9	6
	1000	2	4	9	17	28	21	12	7
	1250	3	5	10	20	36	26	13	8
	1450	3	6	11	22	44	30	14	9
1250	500	1	2	5	9	11	9	5	4
	750	2	3	7	13	19	15	8	6
	1000	2	4	8	17	26	20	11	7
	1250	3	5	9	19	35	24	12	8
	1450	3	5	10	21	43	28	12	8

TL-CN – Core Silencer

When ordering, please provide information according to the following pattern:

TL-CN - <T> - <D> - <L>

Where:

T Flange type*

S - for SEF/SFL/SEF(R)/SEF(V) fan - Eurovent 1/2 standard

A - for AFC/ARC/AJF fan

iSWAY - for iSWAY-FC-B unit without housing

D Silencer diameter

L Silencer length

* optional values – if not specified, the default values will be used

Order example: **TL-CN-S-355-1000**