TAS
CIRCULAR SILENCER

Characteristics:
TAS are circular silencers with a housing that attenuates sound transferred by ducts in ventilation systems.

Intended use:

The TAS silencers are designed for attenuating noise transferred by ducts in ventilation systems. They are usually located between fans and intake or extraction ducts as well as before intake ventilators which supply air to rooms requiring high acoustic comfort.

Design

A spiro pipe, made of galvanised steel sheet, makes an external silencer housing. Inside the housing, there is a 50 mm thick damping insert, made of non-flammable sound absorbing material, protected by a tissue and a shutter made of perforated galvanised steel sheet. The TAS silencers are normally fitted with nipple connectors adjusted to the standardized diameters of circular spiro ducts.

Application

The tightness of the standard TAS 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 2,000 Pa. The recommended airflow speed for using TAS dampers is up to 12 m/s.

Installation

As standard, the TAR silencers can be installed inside buildings in both vertical and horizontal positions. The silencers are installed by means of lifting slings.

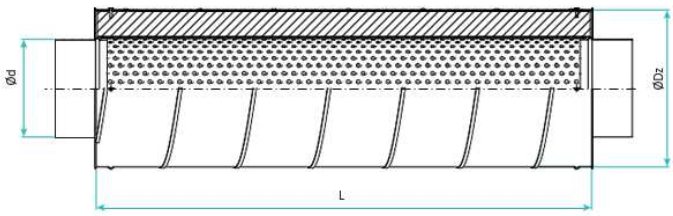


Figure 1. TAS silencer

Technical Data

Table 1. TAS silencer dimensions and weight

Diameter Ød [mm]	External diameter ØDz [mm]	Weight m [kg]		
		L = 500 [mm]	L = 1000 [mm]	L = 1500 [mm]
100	200	4	8	12
125	225	5	9	14
160	280	7	13	20
200	315	8	17	25
250	355	10	20	29
315	450	12	23	35
400	500	13	27	40

Table 2. TAS silencer internal noise, L_{WA} [dB(A)]

Diameter Ød [mm]	Flow rate v [m/s]			
	5	8	10	12
100	<5	16	23	28
125	<5	17	24	30
160	<5	21	27	32
200	5	22	28	34
250	8	24	31	36
315	10	26	32	38
400	13	27	34	41

Table 3. TAS silencer attenuation, length 500 mm, D_e [dB]

Diameter Ød [mm]	Frequency f_m [Hz]							
	63	125	250	500	1k	2k	4k	8k
100	2	4	7	14	25	22	18	15
125	1	4	7	13	23	19	15	13
160	1	3	6	12	20	15	12	10
200	1	3	6	11	17	12	10	8
250	0	2	5	10	15	9	7	6
315	0	2	5	10	12	5	4	3
400	0	1	4	9	9	2	1	1

Table 4. TAS silencer attenuation, length 1000 mm, D_e [dB]

Diameter Ød [mm]	Frequency f_m [Hz]							
	63	125	250	500	1k	2k	4k	8k
100	5	8	16	30	43	47	32	24
125	3	7	15	27	39	40	27	20
160	3	6	13	25	35	33	23	16
200	2	5	11	22	31	26	18	13
250	1	4	10	20	27	19	14	10
315	1	3	8	17	23	13	9	6
400	0	2	6	14	19	6	4	2

Table 5. TAS silencer attenuation, length 1500 mm, D_e [dB]

Diameter Ød [mm]	Frequency f_m [Hz]							
	63	125	250	500	1k	2k	4k	8k
100	7	10	22	38	50	50	43	30
125	4	9	20	35	49	50	37	26
160	4	8	18	31	45	45	31	22
200	3	7	15	28	41	36	25	19
250	1	6	13	24	38	27	19	15
315	1	5	11	21	34	17	12	11
400	0	3	8	17	30	7	6	7

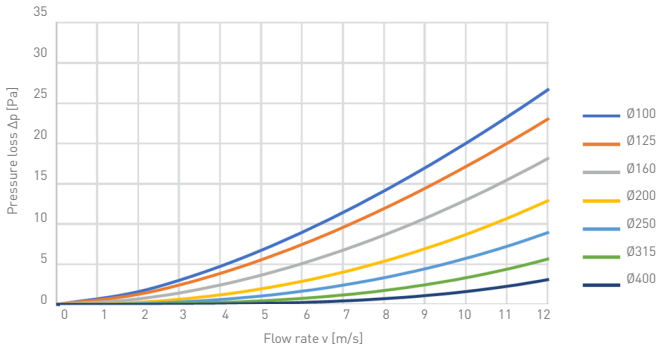


Chart 1. TAS silencer pressure loss, length 500 mm

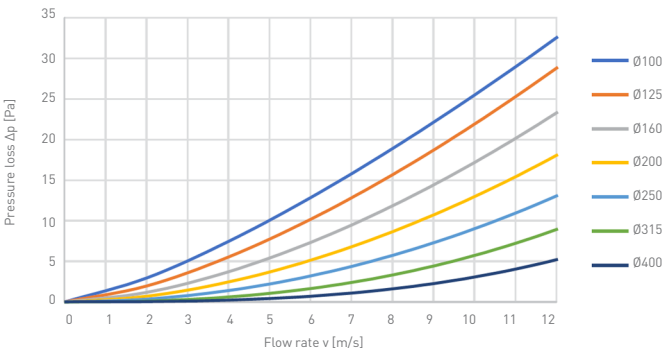


Chart 2. TAR silencer pressure loss, length 1,000 mm

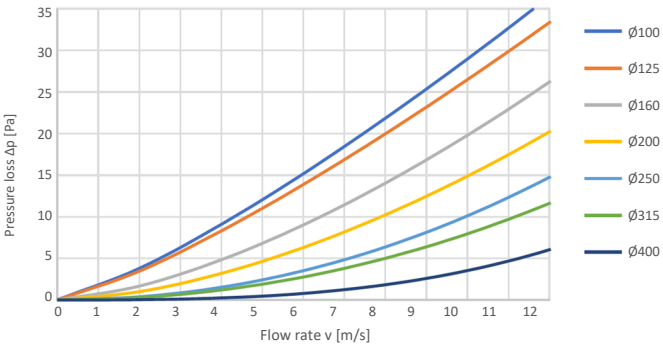


Chart 3. TAS silencer pressure loss, length 1,500 mm

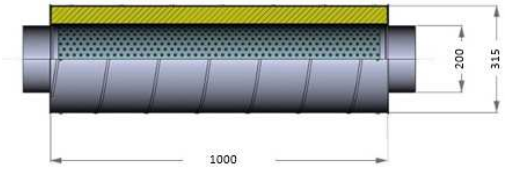
At
http://tlumiki.smay.pl/
you will find a selection tool to easily and quickly choose the right silencers with different configurations.

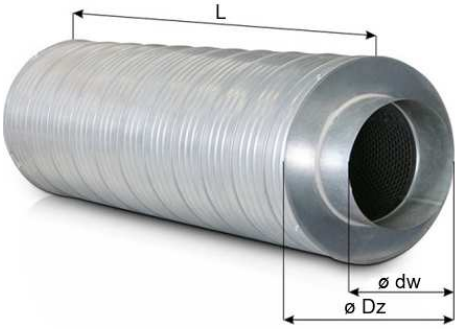
A sample selection
TAS silencer

TAS-200-1000-N

Silencer selection:

Internal diameter	dw=	200 mm
External diameter	Dz=	315 mm
Silencer length	L=	1000 mm
Fitting	J=	N
Weight	m=	17 kg

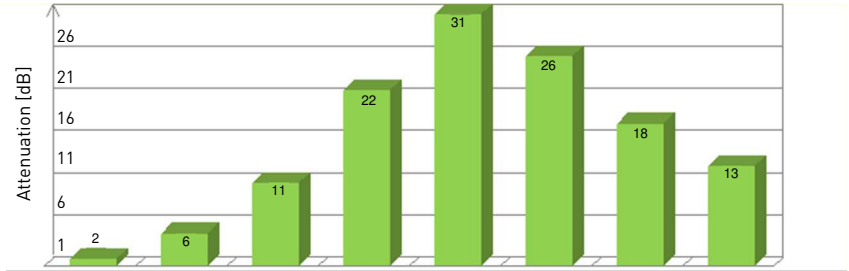




Flow parameters:

Volumetric air flow	V=	750 m³/h
Air flow rate	w=	6.6 m/s
Pressure loss	dp=	<10 Pa

Attenuation rate:



Frequency:	f =	63	125	250	500	1,000	2,000	4,000	8,000	[Hz]
Attenuation rate:	Dt =	2	5	11	22	31	26	18	13	[dB]

Figure 2. Example of a TAS silencer selection

TAS – Circular Silencer

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

TAR – <D> – <L>

Where:

D	silencer internal diameter in mm: 100, 125, 160, 200, 250, 315, 400
L	silencer length in mm: 500, 1,000

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

Order example: **TAS-200-1000**