

Master-Lock Acoustical Duct

Master-Lock Silencer SA-TLD-5

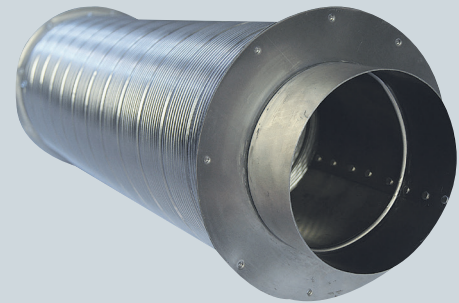
The Master-Lock Aluminum Acoustical Silencer is an all metal flexible duct, constructed entirely without the use of adhesives. The Master-Lock mechanical joint makes an air tight seam, while the circumferential corrugations provide excellent strength and flexibility. Center line radius is 1.5 times the diameter. Master-Lock Aluminum Acoustical Silencers are tested by ETL for insertion loss and are available in 5 foot standard lengths.

Construction

- Metal Core is constructed from perforated and corrugated dead soft aluminum with mechanical interlocking seams.
- Packed Fiberglass Insulation is used between the core and outer shell.
- Outer Shell is constructed from dead soft aluminum that is corrugated with mechanical interlocking seams to form an air tight, flexible, metal duct.
- End Treatments are constructed from aluminum that is mechanically fastened to the core and outer shell then sealed with UL 181 duct sealer to create a flexible, air tight, sound attenuator.

Applications

- For sound attenuation before and after the terminal box where discharge noise and radiated noise is undesirable
- Used as a straight or elbow silencer for exposed air distribution systems
- Used as a final sound attenuator to eliminate noise at air devices
- For sound attenuation of fan noise from ducted and non ducted return air ducts
- To eliminate cross talk from transfer ducts
- Used for return air connections on fan powered terminal boxes and heat pumps
- To eliminate fan noise from exhaust fans in single wall duct systems
- Used with high velocity fans and blowers to eliminate discharge noise to occupied areas in industrial applications



Technical Data:

Standard lengths (feet)	5 ft
Inside Diameter (inch)	6", 8", 10", 12", 14"
Inside Bend Radius (inches)	1.5 x I.D. (all sizes)
Air Friction Loss	See Friction Loss Chart
Test Standard	UL181
Tested By	Intertek/ETL
Certifications Met	Class 1 Air Duct, NFPA 90A and 90B, BOCA, SBBC, HUD/FHA, MIN Property Std.
Internal Working Pressure (W.G.)	10" w.g. positive, 12" w.g. negative
Rated Velocity	5500 F.P.M.
Minimum Burst Pressure	2 ½ times working pressure
Operating Temperature Range	-60° to +250°F
Flame Spread	Less than 25
Smoke Developed	Less than 50
Thermal Conductance	R8

Master-Lock Silencer SA-TLD-5

Radiated Noise Reduction in dB

Product	FPM	125	250	500	1K	2K	4K	8K
SA-TLD-5 10"	0	31	39	42	41	32	22	20
	2500	29	38	40	40	31	22	20

Straight Attenuator - Insertion Loss in dB

Product	FPM	125	250	500	1K	2K	4K	8K
SA-TLD-5 6"	-2500	12	25	>44	44	34	21	14
	0	10	24	44	46	34	21	14
	2500	10	25	>41	>42	34	21	13
SA-TLD-5 10"	-2500	7	18	31	38	25	16	12
	0	6	18	31	37	25	16	11
	2500	6	17	29	36	25	16	11
SA-TLD-5 14"	-2500	9	15	25	28	15	12	8
	0	5	11	24	26	16	13	7
	2500	7	13	23	26	16	13	6

Testing was provided by Intertek Laboratories. Testing was conducted in accordance with ASTM Standard E477-2006a, entitled "Standard Test Method for Measuring Acoustical and Airflow Performance of Duct Liner Materials and Prefabricated Silencers" and ADC test Code FD 72-R1, entitled "Flexible Air Duct Test Code FD 72".

Note: Insertion loss data denoted with a (>) sign has been corrected to take into consideration the effect of the generated sound pressure level approaching the sound pressure level obtained during the insertion loss portion of the test. In some cases, the insertion loss may be higher than shown.

Attenuator with 90° Bend – Insertion Loss in dB

Product	FPM	125	250	500	1K	2K	4K	8K
SA-TLD-5 6"	-2500	10	24	45	46	35	23	14
	0	10	22	44	47	34	21	14
	2500	8	24	42	44	35	23	13
SA-TLD-5 10"	-2500	5	19	30	38	25	15	11
	0	4	15	31	36	26	14	9
	2500	4	18	28	36	25	15	10
SA-TLD-5 14"	-2500	7	12	24	32	16	12	8
	0	3	9	22	28	16	12	5
	2500	6	11	22	30	17	13	6

Data is extrapolated using previous Straight and 90° TLD third party test data. The ratios from these test samples, in conjunction with the Intertek Straight Insertion Loss Values, were used to calculate the approximate 90° Bend Insertion Loss Values.