ArtUSA INDUSTRIES

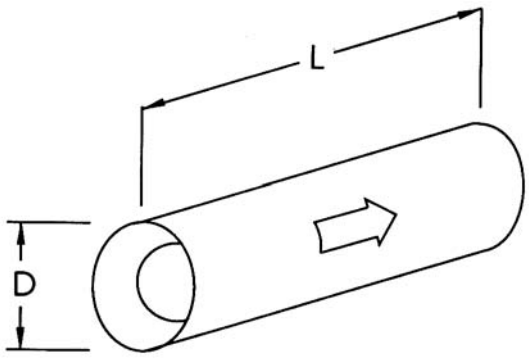
"The ART of Noise Control"

For your local ArtUSA Representative
Call: 1-888-454-6973
Internet: www.artusaindustries.us

Sound Attenuator

NO. 763-89

ENGINEERING DATA SHEET



MODEL SS

CIRCULAR

NOMENCLATURE EXAMPLE:

DIAMETER	LENGTH	MODEL
24 ∅	**72**	**SS-HP**

ArtUSA Acoustics sound attenuators are engineered to achieve a maximum insertion loss with a minimum pressure drop. ArtUSA Acoustics sound attenuators feature airfoil design for efficient aerodynamic performance, as well as superior acoustical materials and totally galvanized steel construction, guaranteeing excellent reliability and performance.

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
SS-HP	-4000	5	11	16	23	22	17	11	11
	-2000	5	10	15	22	21	18	12	12
	0	6	11	15	21	20	17	12	11
	+2000	5	10	13	19	21	19	12	11
	+4000	3	9	14	18	20	19	12	12
SS-LP	-4000	4	8	13	15	16	11	9	8
	-2000	2	7	11	14	15	11	9	8
	0	3	6	11	14	15	12	10	9
	+2000	2	5	10	13	14	11	9	8
	+4000	2	5	10	13	14	11	9	8

THIS TABLE CONTAINS BOTH FORWARD (+) AND BACKWARD (-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS BASED ON TEST RESULTS MEASURED IN ACCORDANCE WITH ASTM E477. COPIES OF THESE TEST REPORTS CAN BE FURNISHED UPON REQUEST.

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STATIC PRESSURE LOSS IN INCHES H20

MODEL	SS-HP	0.15	0.26	0.40	0.58	0.78	1.01	1.27	1.54	1.86
	SS-LP	0.09	0.15	0.24	0.34	0.47	0.61	0.77	0.94	1.14
	VELOCITY	1780	2350	2920	3490	4060	4635	5210	5775	6345
SIZE D x L	FACE AREA	AIR FLOW IN CFM								
12 x 36	0.79	1406	1857	2307	2757	3207	3662	4116	4562	5013
14 x 36	1.07	1905	2515	3124	3734	4344	4959	5575	6179	6789
16 x 36	1.40	2492	3290	4088	4886	5684	6489	7294	8085	8883
18 x 36	1.77	3151	4160	5168	6177	7186	8204	9222	10222	11231
20 x 40	2.18	3880	5123	6366	7608	8851	10104	11358	12590	13832
22 x 44	2.64	4699	6204	7709	9214	10718	12236	13754	15246	16751
24 x 48	3.14	5589	7379	9169	10959	12748	14554	16359	18134	19923
26 x 52	3.69	6568	8672	10775	12878	14981	17103	19225	21310	23413
28 x 56	4.28	7618	10058	12498	14937	17377	19838	22299	24717	27157
30 x 60	4.91	8740	11539	14337	17136	19935	22758	25581	28355	31154
32 x 64	5.58	9932	13113	16294	19474	22655	25863	29072	32225	35405
36 x 72	7.07	12585	16615	20644	24674	28704	32769	36835	40829	44859
40 x 80	8.73	15539	20516	25492	30468	35444	40464	45483	50416	55392
44 x 88	10.56	18797	24816	30835	36854	42874	48946	55018	60984	67003
48 x 96	12.57	22375	29540	36704	43869	51034	58262	65490	75292	79757
52 x 104	14.75	26255	34663	43070	51478	59885	68366	76848	85181	93589
56 x 112	17.10	30438	40185	49932	59679	69426	79259	89091	98753	108500
60 x 120	19.63	34941	46131	57320	68509	79698	90985	102272	113363	124552

Air flow ratings shown include static regain. Therefore if silencers are installed immediately before or after elbows, transitions, at the intake or discharge of the system, or without duct, allowance to compensate for such conditions must be included when calculating the operating pressure loss thru the silencer. Failure to make allowance for these conditions can add several velocity heads to the pressure loss of the system.

SELF-GENERATED SOUND POWER RATINGS (PWL)
dB re 10^{-12} WATTS

MODEL	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM								
SS-HP	-4000	62	63	64	63	62	64	64	62
	-2000	51	49	50	48	47	48	46	40
	+2000	57	53	48	46	47	47	40	33
	+4000	72	65	62	63	64	60	57	53
SS-LP	-4000	66	65	64	63	62	63	61	55
	-2000	53	51	50	52	51	49	42	31
	+2000	55	53	49	47	46	43	38	29
	+4000	72	66	63	65	64	63	60	54

SELF-GENERATED SOUND RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.75	1.5	2	2.5	3.1	4.0	6.0	12	20
PWL ADJUSTMENT FACTOR, dB	-6	-3	-2	-1	0	+1	+3	+6	+8