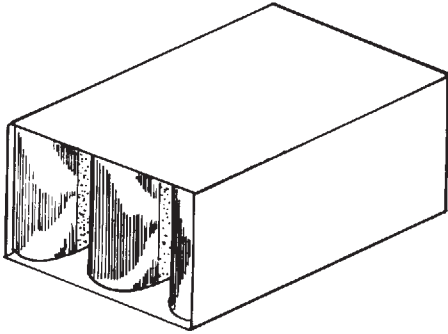


RECTANGULAR SOUND ATTENUATORS

S.P.O.T.

SPIRAL PIPE OF TEXAS, INC.
600 N. HAYS
FORT WORTH, TEXAS 76102



ENGINEERING DATA

DYNAMIC INSERTION LOSS

SILENCER MODEL No.	OCTAVE BANDS	2	3	4	5	6	7	8
	CENTER FREQ.	125	250	500	1000	2000	4000	8000
	FACE VELOCITY F.P.M.	NET INSERTION LOSS IN DECIBELS						
SA-3	-1500	8	22	28	38	39	26	14
	-1000	10	22	32	42	39	30	17
	0	8	18	30	42	40	31	19
	+1000	6	15	28	42	42	32	19
	+1500	6	14	25	32	34	30	17
SA-5	-1500	15	33	46	47	41	35	26
	-1000	13	30	45	53	50	47	26
	0	12	26	42	53	58	49	27
	+1000	11	23	40	52	55	49	29
	+1500	9	21	40	50	50	44	29
SA-7	-1500	16	36	45	48	42	34	31
	-1000	15	36	48	57	54	52	34
	0	15	35	46	54	53	52	34
	+1000	15	34	45	55	55	52	35
	+1500	10	33	44	47	48	41	35

ACOUSTIC AND AERODYNAMIC DATA ARE BASED ON COMPARATIVE TEST RESULTS OBTAINED IN AN INDEPENDENT TESTING LABORATORY.

IN AN ONGOING EFFORT TO IMPROVE OUR PRODUCTS, SPIRAL PIPE OF TEXAS RESERVES THE RIGHT TO REVISE THE DESIGN & SPECIFICATIONS AT ANY TIME.

DESCRIPTION

SPOT SOUND ATTENUATORS ARE CONSTRUCTED OF 22 GA GALVANIZED SHELLS WITH 22 GA GALVANIZED PERFORATED BAFFLES AND 4#/FT³ MINERAL FIBER FILL. A FULL COMPLEMENT OF SIZES 6" to 48" x 6" TO 48" IS AVAILABLE. CONTACT THE FACTORY FOR OPTIONAL MATERIALS AND CONSTRUCTIONS.

ORDERING INFORMATION

INCLUDE MODEL NUMBER AND DIMENSIONS IN THE FOLLOWING ORDER

	<u>W</u>	<u>H</u>	<u>L</u>	<u>MODEL</u>
EXAMPLE	24	24	60	SA-5

AIR FLOW PERFORMANCE DATA

MODEL	STATIC PRESSURE LOSS (INCHES W.G.)						
	SA-3	.07	.12	.18	.24	.38	.49
SA-5	.07	.13	.20	.27	.42	.55	
SA-7	.10	.18	.27	.36	.56	.73	
FACE VELOCITY F.P.M.	365	490	610	705	875	1000	

TO OBTAIN APPLICABLE STATIC PRESSURE LOSS WITH ACTUAL C.F.M. KNOWN:

$$\text{FACE VELOCITY} = \frac{\text{C.F.M.}}{\text{AREA (sq. ft.)}}$$

$$P_d = \left(\frac{\text{FACE VELOCITY}}{\text{TABLE VELOCITY}} \right)^2 \times$$

TABLE PRESSURE DROP

**SELF NOISE SOUND POWER RATINGS (P.W.L.)
(db re 10⁻¹² WATTS)**

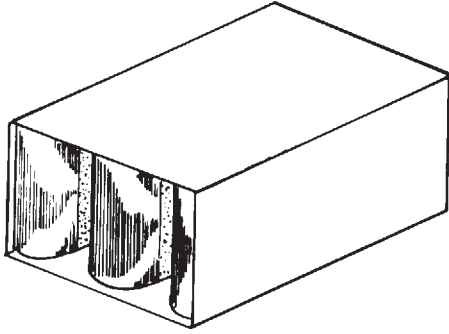
SILENCER MODEL No.	OCTAVE BANDS	2	3	4	5	6	7	8
	CENTER FREQ.	125	250	500	1000	2000	4000	8000
	FACE VELOCITY F.P.M.	SELF NOISE SOUND POWER LEVELS IN DECIBELS						
SA-3	-1500	56	51	53	56	65	66	55
	-1000	46	42	44	50	55	49	40
SA-5	+1000	51	44	43	46	48	45	39
SA-7	+1500	64	55	54	53	57	58	54

FACE AREA ADJUSTMENTS	Area (sq ft)	2	4	8	16	32
		Adjustment	-3	0	+3	+6

RECTANGULAR SOUND ATTENUATORS

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SPIRAL PIPE OF TEXAS, INC.
600 N. HAYS
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ENGINEERING DATA

DYNAMIC INSERTION LOSS

SILENCER MODEL No.	OCTAVE BANDS	2	3	4	5	6	7	8
	CENTER FREQ.	125	250	500	1000	2000	4000	8000
	FACE VELOCITY F.P.M.	NET INSERTION LOSS IN DECIBELS						
MA-3	-1500	9	17	23	32	39	20	13
	-1000	7	15	21	36	40	21	13
	0	6	14	20	35	42	24	16
	+1000	6	13	19	34	42	25	16
	+1500	6	13	18	34	42	25	17
MA-5	-1500	12	25	43	54	49	31	17
	-1000	11	24	42	55	55	32	19
	0	9	21	39	56	57	34	19
	+1000	9	20	38	55	57	35	21
	+1500	9	20	37	54	53	36	21
MA-7	-1500	15	30	36	46	48	32	18
	-1000	15	28	47	57	56	36	20
	0	14	26	46	57	58	38	22
	+1000	14	25	46	58	58	41	23
	+1500	12	25	43	57	56	42	25

ACOUSTIC AND AERODYNAMIC DATA ARE BASED ON COMPARATIVE TEST RESULTS OBTAINED IN AN INDEPENDENT TESTING LABORATORY.

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	<u>W</u>	<u>H</u>	<u>L</u>	<u>MODEL</u>
EXAMPLE	24	24	60	SA-5

AIR FLOW PERFORMANCE DATA

MODEL	STATIC PRESSURE LOSS (INCHES W.G.)						
	MA-3	.05	.07	.11	.15	.24	.33
MA-5	.07	.10	.15	.20	.32	.44	
MA-7	.11	.15	.23	.31	.49	.69	
FACE VELOCITY F.P.M.	585	705	860	1000	1255	1490	

TO OBTAIN APPLICABLE STATIC PRESSURE LOSS WITH ACTUAL C.F.M. KNOWN:

$$\text{FACE VELOCITY} = \frac{\text{C.F.M.}}{\text{AREA (sq. ft.)}}$$

$$Pd = \left(\frac{\text{FACE VELOCITY}}{\text{TABLE VELOCITY}} \right)^2 \times$$

TABLE PRESSURE DROP

SELF NOISE SOUND POWER RATINGS (P.W.L.) (db re 10⁻¹² WATTS)

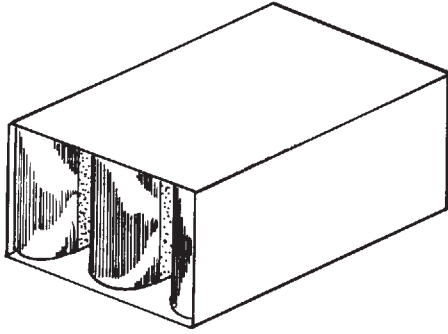
SILENCER MODEL No.	OCTAVE BANDS	2	3	4	5	6	7	8
	CENTER FREQ.	125	250	500	1000	2000	4000	8000
	FACE VELOCITY F.P.M.	SELF NOISE SOUND POWER LEVELS IN DECIBELS						
	-2000	58	55	57	57	64	64	56
	-1000	51	43	44	46	46	36	29
	+1000	43	37	34	37	35	25	28
	+2000	56	50	49	47	54	54	49

FACE AREA ADJUSTMENTS	Area (sq ft)	2	4	8	16	32
	Adjustment		-3	0	+3	+6

RECTANGULAR SOUND ATTENUATORS

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SPIRAL PIPE OF TEXAS, INC.
600 N. HAYS
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ENGINEERING DATA

DYNAMIC INSERTION LOSS

SILENCER MODEL No.	OCTAVE BANDS	2	3	4	5	6	7	8
	CENTER FREQ.	125	250	500	1000	2000	4000	8000
	FACE VELOCITY F.P.M.	NET INSERTION LOSS IN DECIBELS						
LA-3	-1500	5	11	23	41	26	14	7
	-1000	5	10	22	41	26	14	8
	0	4	9	22	41	26	15	10
	+1000	4	9	22	40	26	16	10
	+1500	4	8	20	38	26	17	9
LA-5	-1500	7	15	31	47	40	18	10
	-1000	9	16	33	50	43	21	13
	0	6	13	30	47	40	21	11
	+1000	6	12	29	46	41	22	13
	+1500	6	12	27	44	41	23	13
LA-7	-1500	13	20	34	52	48	25	14
	-1000	13	19	37	51	51	28	14
	0	12	18	37	53	50	30	15
	+1000	12	17	35	52	49	28	15
	+1500	12	17	34	50	49	29	17

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	<u>W</u>	<u>H</u>	<u>L</u>	<u>MODEL</u>
EXAMPLE	24	24	60	SA-5

AIR FLOW PERFORMANCE DATA

MODEL	STATIC PRESSURE LOSS (INCHES W.G.)						
	LA-3	.02	.03	.07	.09	.14	.20
LA-5	.03	.04	.08	.11	.17	.25	
LA-7	.04	.06	.11	.15	.24	.34	
FACE VELOCITY F.P.M.	490	610	860	1000	1255	1500	

TO OBTAIN APPLICABLE STATIC PRESSURE LOSS WITH ACTUAL C.F.M. KNOWN:

$$\text{FACE VELOCITY} = \frac{\text{C.F.M.}}{\text{AREA (sq. ft.)}}$$

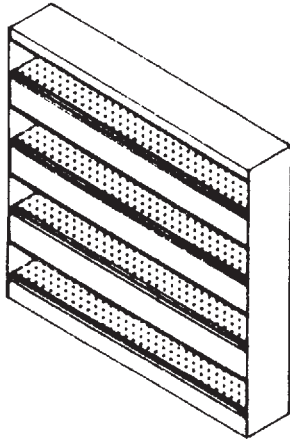
$$P_d = \left(\frac{\text{FACE VELOCITY}}{\text{TABLE VELOCITY}} \right)^2 \times$$

TABLE PRESSURE DROP

**SELF NOISE SOUND POWER RATINGS (P.W.L.)
(db re 10⁻¹² WATTS)**

SILENCER MODEL No.	OCTAVE BANDS	2	3	4	5	6	7	8
	CENTER FREQ.	125	250	500	1000	2000	4000	8000
	FACE VELOCITY F.P.M.	SELF NOISE SOUND POWER LEVELS IN DECIBELS						
	-2000	59	56	55	57	61	47	47
	-1000	45	41	44	44	39	28	28
	+1000	45	36	35	37	32	26	28
	+2000	57	52	49	49	54	52	45

FACE AREA ADJUSTMENTS	Area (sq ft)	2	4	8	16	32
	Adjustment	-3	0	+3	+6	+9



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SUBMITTAL

MODEL B - VENT ATTENUATOR

PROJECT
ARCHITECT
ENGINEER
CONTRACTOR

LOCATION
FILE NO.
CERTIFIED
DATE
PAGE **OF**

NOISE REDUCTION

MODEL	CENTER FREQ. TRANSMISSION LOSS (TL) dB	63	125	250	500	1000	2000	4000	8000
B		5	4	5	6	9	13	14	13
	DYNAMIC INSERTION LOSS @750 FPM	2	2	3	6	10	15	15	13

MATERIAL SPECIFICATIONS

OUTER CASINGS 20 GAUGE MINIMUM GALVANIZED (G-90) STEEL
INTERIOR BAFFLES 22 GAUGE MINIMUM GALVANIZED PERFORATED STEEL
ACOUSTIC FILL 4 LB. PER CU.FT. INORGANIC MINERAL WOOL TYPE
 ACOUSTICAL FILL (PACKED UNDER 5% COMPRESSION)

FIRE RATED CHARACTERISTICS: (IN ACCORDANCE WITH A.S.T.M. E84)

FLAME SPREAD 15
FUEL CONTRIBUTED 0
SMOKE DEVELOPED 0

ATTENUATORS SHALL WITHSTAND A DIFFERENTIAL AIR PRESSURE OF 8" W.G. WITHOUT STRUCTURAL FAILURE.

AIR FLOW PERFORMANCE DATA

STATIC PRESSURE DROP IN. W.G.	0.05	0.15	0.30	0.60	0.75	1.00
FACE VELOCITY FPM	200	350	500	700	800	900