



SoundChek RECTANGULAR DISSIPATIVE SILENCER MODEL AM

3900 Dr. Greaves Rd., Kansas City, MO 64030 • Phone (816) 761-7476 • FAX (816) 763-0986 • Email: info@ruskinsound.com • Website: ruskinsound.com

NET INSERTION LOSS RATINGS (SEE NOTES 1, 2 AND 3)										
MODEL AM	FACE VELOCITY (FPM)	STATIC PRESSURE DROP (WG)	OCTAVE BAND NUMBER & CENTER FREQ. (Hz)							
			1	2	3	4	5	6	7	8
			63	125	250	500	1000	2000	4000	8000
INSERTION LOSS (dB)										
AM-36	-3000	0.81	6	8	15	21	30	26	16	11
	-1500	0.20	5	8	16	22	31	26	17	11
	0	–	4	7	15	21	30	28	19	14
	1500	0.20	4	6	14	20	29	28	19	14
	3000	0.81	3	5	12	18	27	28	19	14
AM-60	-3000	0.95	8	12	25	36	41	31	17	13
	-1500	0.24	8	13	25	36	46	33	20	13
	0	–	6	11	21	31	47	38	24	17
	1500	0.24	5	10	20	30	46	38	24	17
	3000	0.95	5	8	18	29	44	38	24	17
AM-84	-3000	1.11	9	17	33	42	41	38	26	16
	-1500	0.28	9	18	33	42	49	40	26	16
	0	–	8	16	27	37	53	49	32	22
	1500	0.28	7	15	26	36	53	49	32	22
	3000	1.11	6	12	24	36	51	49	32	22
AM-120	-3000	1.28	12	24	38	42	48	41	29	17
	-1500	0.32	14	27	38	47	56	53	33	21
	0	–	11	23	36	48	65	65	42	28
	1500	0.32	9	21	35	46	65	65	42	28
	3000	1.28	7	18	33	45	62	65	42	28



AIRFLOW-GENERATED SOUND POWER LEVELS (See Note 5)									
MODEL AM	OCTAVE BAND NUMBER & CENTER FREQ. (Hz)								
FACE VELOCITY	1	2	3	4	5	6	7	8	
	63	125	250	500	1000	2000	4000	8000	
-3000	64	62	59	54	50	54	57	56	
-2500	59	58	56	51	47	50	53	51	
-2000	55	53	52	47	42	44	47	44	
-1500	49	43	47	42	34	39	42	38	
-1000	42	34	40	35	26	30	32	26	
1000	42	34	40	35	26	30	32	26	
1500	49	43	47	42	34	39	42	38	
2000	55	53	52	47	42	44	47	44	
2500	59	58	56	51	47	50	53	51	
3000	64	62	59	54	50	54	57	56	

FACE AREA ADJUSTMENT FACTORS											
Self Generated Power Levels listed above require adjustment for silencer or silencer banks with face area other than 4 sq. ft. Add or subtract the following factors to all octave bands.											
Face Area (sq ft)	0.5	1	2	4	8	16	32	64	128	256	512
Adjustment Factor (decibels)	-9	-6	-3	0	+3	+6	+9	+12	+15	+18	+21

AIRFLOW PERFORMANCE

RUSKIN MODEL					STATIC PRESSURE LOSS (INCHES WG)															
AM-120					0.058	0.090	0.140	0.185	0.246	0.315	0.393	0.479	0.560	0.662	0.773	0.875	1.002	1.260		
AM-84					0.050	0.077	0.120	0.159	0.211	0.270	0.337	0.411	0.480	0.568	0.663	0.750	0.859	1.080		
AM-60					0.046	0.070	0.110	0.145	0.193	0.248	0.309	0.376	0.440	0.520	0.607	0.688	0.787	0.990		
AM-36					0.037	0.058	0.090	0.119	0.158	0.203	0.253	0.308	0.360	0.426	0.497	0.563	0.644	0.810		
					Face Velocity (fpm)				Airflow (cfm)											
					Size (W x H)	Face Area (Sq. Ft.)	645	800	1000	1150	1325	1500	1675	1850	2000	2175	2350	2500	2675	3000
TOTAL WEIGHTS PER MODULAR SILENCER (LBS) (SEE NOTE 6)	60	42	31	19	6 x 12	0.50	323	400	500	575	663	750	838	925	1000	1088	1175	1250	1338	1500
	66	47	33	21	7½ x 12	0.63	403	500	625	719	828	938	1047	1156	1250	1359	1469	1563	1672	1875
	72	50	36	23	9 x 12	0.75	484	600	750	863	994	1125	1256	1388	1500	1631	1763	1875	2006	2250
	88	61	44	27	12 x 12	1.00	645	800	1000	1150	1325	1500	1675	1850	2000	2175	2350	2500	2675	3000
	146	104	75	46	12 x 24	2.00	1290	1600	2000	2300	2650	3000	3350	3700	4000	4350	4700	5000	5350	6000
	176	124	90	55	12 x 30	2.50	1613	2000	2500	2875	3313	3750	4188	4625	5000	5438	5875	6250	6688	7500
	206	145	105	65	12 x 36	3.00	1935	2400	3000	3450	3975	4500	5025	5550	6000	6525	7050	7500	8025	9000
	98	69	50	31	15 x 12	1.25	806	1000	1250	1438	1656	1875	2094	2313	2500	2719	2938	3125	3344	3750
	166	118	85	53	18 x 24	3.00	1935	2400	3000	3450	3975	4500	5025	5550	6000	6525	7050	7500	8025	9000
	218	154	111	69	21 x 24	3.50	2258	2800	3500	4025	4638	5250	5863	6475	7000	7613	8225	8750	9363	10500
	187	132	95	59	24 x 18	3.00	1935	2400	3000	3450	3975	4500	5025	5550	6000	6525	7050	7500	8025	9000
	231	163	118	73	24 x 24	4.00	2580	3200	4000	4600	5300	6000	6700	7400	8000	8700	9400	10000	10700	12000
	276	195	142	87	24 x 30	5.00	3225	4000	5000	5750	6625	7500	8375	9250	10000	10875	11750	12500	13375	15000
	320	226	164	102	24 x 36	6.00	3870	4800	6000	6900	7950	9000	10050	11100	12000	13050	14100	15000	16050	18000
	374	258	187	116	24 x 42	7.00	4515	5600	7000	8050	9275	10500	11725	12950	14000	15225	16450	17500	18725	21000
	-	-	210	130	24 x 48	8.00	5160	6400	8000	9200	10600	12000	13400	14800	16000	17400	18800	20000	21400	24000
	246	174	126	78	27 x 24	4.50	2903	3600	4500	5175	5963	6750	7538	8325	9000	9788	10575	11250	12038	13500
	162	114	82	50	30 x 12	2.50	1613	2000	2500	2875	3313	3750	4188	4625	5000	5438	5875	6250	6688	7500
	260	184	133	82	30 x 24	5.00	3225	4000	5000	5750	6625	7500	8375	9250	10000	10875	11750	12500	13375	15000
	308	218	158	98	30 x 30	6.25	4031	5000	6250	7188	8281	9375	10469	11563	12500	13594	14688	15625	16719	18750
	357	253	183	114	30 x 36	7.50	4838	6000	7500	8625	9938	11250	12563	13875	15000	16313	17625	18750	20063	22500
	416	287	208	130	30 x 42	8.75	5644	7000	8750	10063	11594	13125	14656	16188	17500	19031	20563	21875	23406	26250
	-	-	233	146	30 x 48	10.00	6450	8000	10000	11500	13250	15000	16750	18500	20000	21750	23500	25000	26750	30000
	325	230	166	103	33 x 30	6.88	4434	5500	6785	7906	9109	10313	11516	12719	13750	14953	16156	17188	18391	20625
	235	166	120	74	36 x 18	4.50	2903	3600	4500	5175	5963	6750	7538	8325	9000	9788	10575	11250	12038	13500
	288	204	148	91	36 x 24	6.00	3870	4800	6000	6900	7950	9000	10050	11100	12000	13050	14100	15000	16050	18000
	341	242	175	109	36 x 30	7.50	4838	6000	7500	8625	9938	11250	12563	13875	15000	16313	17625	18750	20063	22500
	394	279	202	126	36 x 36	9.00	5805	7200	9000	10350	11925	13500	15075	16650	18000	19575	21150	22500	24075	27000
	459	317	230	143	36 x 42	10.50	6773	8400	10500	12075	13913	15750	17588	19425	21000	22838	24675	26250	28088	31500
	-	-	257	160	36 x 48	12.00	7740	9600	12000	13800	15900	18000	20100	22200	24000	26100	28200	30000	32100	36000
	-	-	272	169	39 x 42	11.38	7337	9100	11375	13081	15072	17063	19053	21044	22750	24741	26731	28438	30428	34125
	-	-	182	112	42 x 24	7.00	4515	5600	7000	8050	9275	10500	11725	12950	14000	15225	16450	17500	18725	21000
	-	-	215	134	42 x 30	8.75	5644	7000	8750	10063	11594	13125	14656	16188	17500	19031	20563	21875	23406	26250
	-	-	249	154	42 x 36	10.50	6773	8400	10500	12075	13913	15750	17588	19425	21000	22838	24675	26250	28088	31500
-	-	282	176	42 x 42	12.25	7901	9800	12250	14088	16231	18375	20519	22663	24500	26644	28788	30625	32769	36750	
-	-	316	197	42 x 48	14.00	9030	11200	14000	16100	18550	21000	23450	25900	28000	30450	32900	35000	37450	42000	
-	-	328	205	45 x 48	15.00	9675	12000	15000	17250	19875	22500	25125	27750	30000	32625	35250	37500	40125	45000	
-	-	160	99	48 x 18	6.00	3870	4800	6000	6900	7950	9000	10050	11100	12000	13050	14100	15000	16050	18000	
-	-	196	122	48 x 24	8.00	5160	6400	8000	9200	10600	12000	13400	14800	16000	17400	18800	20000	21400	24000	
-	-	231	144	48 x 30	10.00	6450	8000	10000	11500	13250	15000	16750	18500	20000	21750	23500	25000	26750	30000	
-	-	268	167	48 x 36	12.00	7740	9600	12000	13800	15900	18000	20100	22200	24000	26100	28200	30000	32100	36000	
-	-	305	190	48 x 42	14.00	9030	11200	14000	16100	18550	21000	23450	25900	28000	30450	32900	35000	37450	42000	
-	-	340	212	48 x 48	16.00	10320	12800	16000	18400	21200	24000	26800	29600	32000	34800	37600	40000	42800	48000	

- SoundChek silencers have been tested in accordance with ASTM E-477 standard (Standard Method of Testing Duct Liner Materials and Prefabricated Silencers for Acoustical and Airflow Performance) for 24 inch by 24 inch modular sizes.
- Product performance associated with airflow has been rated for both forward and reverse flow conditions. Forward flow occurs when air flows in the same direction as the noise (typically supply side system). Reverse flow occurs when air flows opposite the noise flow direction.
- Static Pressure Drop values have been measured in accordance with ASTM E-477 testing standard. This standard relies on specific length ductwork up and down stream of the silencer. Therefore the data presented is for laminar flow and includes static regain. If the silencer is to be used under conditions that vary from laminar flow, adjustments must be made to the system calculations. The data presented has been tested under standard conditions with air density of 0.075 pounds mass per cubic foot. Systems moving gases or air of sufficiently different density must allow for a different static pressure drop.
- Insertion Loss Data does not account for break out noise. Therefore to achieve insertion loss in excess of 50 dB duct lagging is suggested.
- Airflow Generated Sound Power Levels should be reviewed when low acoustical design goals are required. This data has been measured per the ASTM E-477 testing standard in enough detail to allow representation for a variety of airflow levels. The face area adjustment factors are

to be used by octave band on the Airflow Generated Power Levels for face areas that differ from 4 square feet.

- Weights and Modular sizes shown on the Airflow Performance chart do not represent a complete list of sizes available. It is only intended to provide the designer with enough information to accurately calculate the specifics for the projects requirements.
- Silencer sizes are defined width by height. This defines the baffle arrangement. Consult your local representative if other than up/down baffle arrangement is required.

Useful Conversions and Formulas

Multiply	by	To Obtain
cfm	.0004719	cubic meters per second (m ³ /sec)
fpm	0.00508	meters per second (m/s)
in	25.4	millimeters (mm)
WG*	249.1	Newton per square meter (n/M ²)
ft	0.3048	meters (m)
ft ²	0.0929	square meters (m ²)
lb	0.4535	kilogram (kg)

To calculate the exact static pressure for airflow not shown on the Airflow Performance Chart use the following ratio: $\sqrt{(sp^1/sp^2)} = (cfm^1/cfm^2)$.

Silencer Face Area is defined as the total inlet area of the silencer. This is not the same as the free area. **CFM = (Face Area sq. ft.) x (fpm)**.