TUBULAR DISSIPATIVE SILENCER
MODEL AX-B

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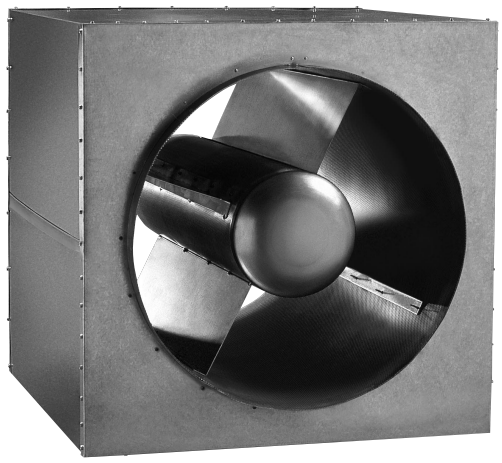
NET INSERTION LOSS RATINGS (SEE NOTES 1, 2, AND 3)									
MODEL AX-B		OCTAVE BAND CENTER FREQ. (Hz)							
FACE VELOCITY (FPM)	STATIC PRESSURE DROP (INCHES WG)	1	2	3	4	5	6	7	8
		63	125	250	500	1000	2000	4000	8000
-6000	.70	10	12	21	32	31	23	15	10
-4000	.31	9	10	20	30	30	24	16	10
-2000	.08	9	10	19	27	30	24	16	13
0	-	9	10	20	27	30	25	18	15
2000	.08	8	9	19	25	28	24	18	15
4000	.31	7	8	18	24	27	23	18	15
6000	.70	6	7	16	23	26	22	17	14



AIRFLOW-GENERATED SOUND POWER LEVELS (SEE NOTE 5)								
MODEL AX-B	OCTAVE BAND CENTER FREQ. (Hz)							
FACE VELOCITY (FPM)	1	2	3	4	5	6	7	8
	63	125	250	500	1000	2000	4000	8000
-6000	77	79	79	82	69	73	73	69
-4000	69	69	66	67	59	61	59	54
-3000	64	63	57	57	52	52	49	44
-2000	56	53	44	42	41	40	35	29
2000	56	53	44	42	41	40	35	29
3000	64	63	57	57	52	52	49	44
4000	69	69	66	67	59	61	59	54
6000	77	79	79	82	69	73	73	69

AIRFLOW-GENERATED SOUND POWER LEVEL AREA CORRECTION FACTORS

Note: Self Generated Power Levels listed above require adjustments for silencers with face area other than 3.14 sq. ft.

Add or subtract the following factors to all octave bands.

Face Area (sq ft)	0.75	1.5	2	2.5	3.1	4	5	6	8	10	12	15	20
Correction PWL (dB)	-6	-3	-2	-1	0	1	2	3	4	5	6	7	8

AIRFLOW PERFORMANCE

RUSKIN MODEL AX-B				STATIC PRESSURE LOSS (INCHES WG)													
				0.020	0.042	0.071	0.108	0.153	0.205	0.266	0.332	0.410	0.500	0.594	0.684	0.789	0.925
Weight (Lbs.)	Inner Diameter (Inches)	Face Velocity (fpm)		1000	1450	1880	2325	2765	3200	3645	4075	4525	5000	5450	5850	6280	6800
		Length (Inches)	Face Area (Sq. Ft.)	Airflow (cfm)													
90	12	36	0.79	785	1139	1477	1826	2172	2513	2863	3200	3554	3927	4280	4595	4932	5341
95	14	36	1.07	1069	1550	2010	2485	2956	3421	3897	4356	4837	5345	5826	6254	6713	7269
100	16	36	1.40	1396	2025	2625	3246	3861	4468	5089	5690	6318	6981	7610	8168	8769	9495
115	18	36	1.77	1767	2562	3322	4109	4886	5655	6441	7201	7996	8836	9631	10338	11098	12017
140	20	40	2.18	2182	3163	4102	5072	6032	6981	7952	8890	9872	10908	11890	12763	13701	14835
165	22	44	2.64	2640	3828	4963	6138	7299	8447	9622	10757	11945	13199	14387	15443	16578	17951
200	24	48	3.14	3142	4555	5906	7304	8687	10053	11451	12802	14216	15708	17122	18378	19729	21363
235	26	52	3.69	3687	5346	6932	8572	10195	11798	13439	15025	16684	18435	20094	21569	23154	25072
270	28	56	4.28	4276	6200	8039	9942	11823	13683	15586	17425	19349	21380	23305	25015	26854	29077
300	30	60	4.91	4909	7118	9228	11413	13573	15708	17892	20003	22212	24544	26753	28716	30827	33379
375	32	64	5.59	5585	8098	10500	12985	15443	17872	20358	22759	25272	27925	30439	32673	35074	37978
475	34	68	6.31	6305	9142	11853	14659	17433	20176	22982	25693	28530	31525	34362	36884	39595	42874
575	36	72	7.07	7069	10249	13289	16434	19545	22619	25765	28804	31985	35343	38524	41351	44391	48066
675	38	76	7.88	7876	11420	14807	18311	21777	25203	28707	32094	35638	39379	42923	46073	49460	53555
775	40	80	8.73	8727	12654	16406	20289	24129	27925	31809	35561	39488	43633	47560	51051	54803	59341
880	42	84	9.62	9621	13951	18088	22369	26602	30788	35069	39206	43536	48106	52435	56284	60421	65424
980	44	88	10.56	10559	15311	19851	24550	29196	33790	38488	43029	47781	52796	57548	61772	66312	71803
1130	46	92	11.54	11541	16734	21697	26833	31911	36931	42067	47030	52223	57705	62898	67515	72477	78479
1275	48	96	12.57	12566	18221	23625	29217	34746	40212	45804	51208	56863	62832	68487	73513	78917	85451
1400	50	100	13.64	13635	19771	25635	31702	37702	43633	49701	55564	61700	68177	74313	79767	85630	92721
1525	52	104	14.75	14748	21385	27726	34289	40778	47194	53757	60098	66735	73740	80377	86276	92618	100287
1650	54	108	15.90	15904	23061	29900	36978	43975	50894	57971	64810	71967	79522	86679	93040	99879	108149
1775	56	112	17.10	17104	24801	32156	39767	47293	54734	62345	69700	77397	85521	93218	100060	107415	116309
1910	58	116	18.35	18348	26604	34494	42659	50732	58713	66878	74767	83024	91739	99995	107334	115224	124765
2050	60	120	19.63	19635	28471	36914	45651	54291	62832	71569	80012	88848	98175	107010	114864	123308	133518
2168	62	124	20.96	20955	30385	39396	48721	57941	67056	76381	85392	94822	104776	114206	122588	131598	142495
2297	64	128	22.33	22329	32377	41978	51915	61739	71452	81389	90990	101038	111644	121692	130624	140225	151836
2426	66	132	23.75	23746	34432	44643	55210	65658	75988	86555	96766	107452	118731	129417	138916	149126	161475
2554	68	136	25.21	25207	36550	47390	58607	69698	80663	91880	102719	114063	126036	137379	147462	158301	171409
2684	70	140	26.71	26712	38732	50218	62105	73858	85478	97365	108851	120871	133559	145579	156264	167750	181640
2812	72	144	28.26	28260	40977	53129	65705	78139	90432	103008	115160	127877	141300	154017	165321	177473	192168

1. Ruskin 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 diameter modular size.
2. 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.
3. 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.
4. Insertion Loss Data does not account for break out noise. Therefore to achieve insertion loss in excess of 50 dB duct lagging is suggested.
5. 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.
6. **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.
7. Silencer sizes are defined by inside diameter.

Useful Conversions and Formulas

Multiply	by	To Obtain
cfm	4.719 x 10-4	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 = (Inlet Area sq. ft.) x (fpm)**

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