



**SoundChek  
STRAIGHT POD RECTANGULAR  
DISSIPATIVE SILENCER  
MODEL SLF**

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NET INSERTION LOSS RATINGS (SEE NOTES 1, 2 AND 3)										
MODEL SLF	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)										
SLF-36	-1000	0.569	4	13	18	29	36	25	15	15
	-500	0.142	3	12	17	32	41	29	16	17
	0	–	3	12	16	29	37	30	15	16
	500	0.142	2	11	15	25	33	30	14	15
	1000	0.569	2	9	14	23	30	29	13	17
SLF-60	-1000	0.623	6	17	26	38	46	34	21	14
	-500	0.156	6	17	25	41	48	37	22	16
	0	–	5	17	24	39	48	39	22	17
	500	0.156	4	16	23	36	47	40	22	18
	1000	0.623	4	15	22	34	42	38	22	19
SLF-84	-1000	0.677	9	22	34	47	56	44	27	17
	-500	0.169	8	22	33	50	58	47	28	18
	0	–	8	22	32	49	60	49	30	20
	500	0.169	7	21	30	48	61	50	31	21
	1000	0.677	6	20	29	46	55	48	31	22
SLF-120	-1000	0.759	13	29	45	61	71	58	36	21
	-500	0.190	12	29	45	63	73	61	37	22
	0	–	11	29	44	65	78	63	41	24
	500	0.190	10	29	42	68	83	65	45	25
	1000	0.759	10	28	40	65	77	63	45	26



AIRFLOW-GENERATED SOUND POWER LEVELS (See Note 5)									
MODEL SLF	OCTAVE BAND NUMBER & CENTER FREQ. (Hz)								
FACE VELOCITY	1	2	3	4	5	6	7	8	
	63	125	250	500	1000	2000	4000	8000	
-1000	62	49	44	44	47	56	55	43	
-500	46	36	29	30	38	49	38	20	
500	39	38	30	29	28	36	26	15	
1000	65	58	50	47	45	50	47	40	

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)																
TOTAL WEIGHTS PER MODULAR SILENCER (LBS) (SEE NOTE 6)	SLF-120				0.068	0.113	0.171	0.230	0.311	0.399	0.498	0.615	0.736	0.837	1.004	1.139	1.333	1.488			
	SLF-84				0.061	0.100	0.153	0.205	0.277	0.356	0.444	0.548	0.657	0.746	0.895	1.016	1.189	1.327			
	SLF-60				0.056	0.092	0.141	0.188	0.255	0.327	0.409	0.505	0.604	0.687	0.824	0.935	1.094	1.221			
	SLF-36				0.051	0.084	0.128	0.172	0.233	0.299	0.373	0.461	0.552	0.627	0.753	0.854	0.999	1.115			
					Face Velocity (fpm)			300	385	475	550	640	725	810	900	985	1050	1150	1225	1325	1400
					Size (W x H)	Face Area (Sq. Ft.)	Airflow (cfm)														
	70	50	36	22	9 x 12	0.75	225	289	356	413	480	544	608	675	739	788	863	919	994	1050	
	81	57	42	26	12 x 12	1.00	300	385	475	550	640	725	810	900	985	1050	1150	1225	1325	1400	
	137	96	70	43	12 x 24	2.00	600	770	950	1100	1280	1450	1620	1800	1970	2100	2300	2450	2650	2800	
	165	116	84	52	12 x 30	2.50	750	963	1188	1375	1600	1813	2025	2250	2463	2625	2875	3063	3313	3500	
193	136	98	61	12 x 36	3.00	900	1155	1425	1650	1920	2175	2430	2700	2955	3150	3450	3675	3975	4200		
86	60	44	27	15 x 12	1.25	375	481	594	688	800	906	1013	1125	1231	1313	1438	1531	1656	1750		
95	67	49	30	18 x 12	1.50	450	578	713	825	960	1088	1215	1350	1478	1575	1725	1838	1988	2100		
203	143	104	65	21 x 24	3.50	1050	1348	1663	1925	2240	2538	2835	3150	3448	3675	4025	4288	4638	4900		
175	124	89	55	24 x 18	3.00	900	1155	1425	1650	1920	2175	2430	2700	2955	3150	3450	3675	3975	4200		
218	154	112	69	24 x 24	4.00	1200	1540	1900	2200	2560	2900	3240	3600	3940	4200	4600	4900	5300	5600		
260	183	134	83	24 x 30	5.00	1500	1925	2375	2750	3200	3625	4050	4500	4925	5250	5750	6125	6625	7000		
302	214	155	96	24 x 36	6.00	1800	2310	2850	3300	3840	4350	4860	5400	5910	6300	6900	7350	7950	8400		
231	164	119	74	27 x 24	4.50	1350	1733	2138	2475	2880	3263	3645	4050	4433	4725	5175	5513	5963	6300		
152	107	77	47	30 x 12	2.50	750	963	1188	1375	1600	1813	2025	2250	2463	2625	2875	3063	3313	3500		
245	173	125	78	30 x 24	5.00	1500	1925	2375	2750	3200	3625	4050	4500	4925	5250	5750	6125	6625	7000		
292	206	150	93	30 x 30	6.25	1875	2406	2969	3438	4000	4531	5063	5625	6156	6563	7188	7656	8281	8750		
339	241	174	109	30 x 36	7.50	2250	2888	3563	4125	4800	5438	6075	6750	7388	7875	8625	9188	9938	10500		
308	218	159	99	33 x 30	6.88	2063	2647	3266	3781	4400	4984	5569	6188	6772	7219	7906	8422	9109	9625		
221	158	113	71	36 x 18	4.50	1350	1733	2138	2475	2880	3263	3645	4050	4433	4725	5175	5516	5963	6300		
273	194	140	88	36 x 24	6.00	1800	2310	2850	3300	3840	4350	4860	5400	5910	6300	6900	7350	7950	8400		
324	230	167	104	36 x 30	7.50	2250	2888	3563	4125	4800	5438	6075	6750	7388	7875	8625	9188	9938	10500		
376	266	194	121	36 x 36	9.00	2700	3465	4275	4950	5760	6525	7290	8100	8865	9450	10350	11025	11925	12600		

1. 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.
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 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 <sup>3</sup> /sec)
fpm	0.00508	meters per second (m/s)
in	25.4	millimeters (mm)
WG*	249.1	Newton per square meter (n/M <sup>2</sup> )
ft	0.3048	meters (m)
ft <sup>2</sup>	0.0929	square meters (m <sup>2</sup> )
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).**

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for a Noisy World!**

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