



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

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 MLF	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)										
MLF-36	-2000	0.763	3	10	13	18	23	15	14	11
	-1000	0.191	3	9	12	21	24	16	15	12
	0	-	4	9	12	20	23	17	14	14
	1000	0.191	4	8	12	18	21	18	13	15
	2000	0.763	3	8	11	16	20	19	13	15
MLF-60	-2000	0.836	5	15	22	28	34	22	19	13
	-1000	0.209	5	14	21	30	35	23	20	14
	0	-	5	13	20	31	35	25	19	16
	1000	0.209	5	11	19	31	34	26	18	17
	2000	0.836	4	11	18	28	33	26	18	17
MLF-84	-2000	0.908	8	20	31	38	47	29	23	16
	-1000	0.227	7	19	30	40	46	30	24	17
	0	-	7	17	29	42	47	32	24	18
	1000	0.227	6	14	27	43	47	33	23	19
	2000	0.908	5	14	26	41	46	34	23	19
MLF-120	-2000	1.018	11	27	44	54	65	40	30	19
	-1000	0.254	11	27	44	55	65	41	31	20
	0	-	9	23	41	59	66	43	31	21
	1000	0.254	7	19	38	62	66	44	31	21
	2000	1.018	7	18	37	60	66	45	31	22



AIRFLOW-GENERATED SOUND POWER LEVELS (See Note 5)									
MODEL MLF	OCTAVE BAND NUMBER & CENTER FREQ. (Hz)								
FACE VELOCITY	1	2	3	4	5	6	7	8	
	63	125	250	500	1000	2000	4000	8000	
-2000	68	65	64	62	60	64	64	54	
-1000	55	54	50	47	49	50	39	30	
1000	51	43	41	36	39	45	33	27	
2000	69	60	57	53	52	56	58	49	

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)	MLF-120				0.064	0.107	0.163	0.229	0.307	0.397	0.498	0.610	0.734	0.869	1.016	1.174	1.344	1.525					
	MLF-84				0.057	0.096	0.145	0.205	0.275	0.355	0.445	0.545	0.656	0.777	0.908	1.049	1.201	1.363					
	MLF-60				0.052	0.088	0.134	0.189	0.253	0.327	0.410	0.502	0.604	0.715	0.836	0.966	1.106	1.255					
	MLF-36				0.048	0.081	0.122	0.172	0.231	0.298	0.374	0.459	0.552	0.654	0.764	0.883	1.010	1.146					
				Face Velocity (fpm)				Airflow (cfm)															
				Size (W x H)	Face Area (Sq. Ft.)	500	650	800	950	1100	1250	1400	1550	1700	1850	2000	2150	2300	2450				
59	42	30	18	9 x 12	0.75	375	488	600	713	75	938	1050	1163	1275	1388	1500	1613	1725	1838				
76	53	38	23	12 x 12	1.00	500	650	800	950	100	1250	1400	1550	1700	1850	2000	2150	2300	2450				
126	90	65	40	12 x 24	2.00	1000	1300	1600	1900	200	2500	2800	3100	3400	3700	4000	4300	4600	4900				
152	107	78	48	12 x 30	2.50	1250	1625	2000	2375	250	3125	3500	3875	4250	4625	5000	5375	5750	6125				
178	126	90	56	12 x 36	3.00	1500	1950	2400	2850	300	3750	4200	4650	5100	5550	6000	6450	6900	7350				
80	56	41	25	15 x 12	1.25	625	813	1000	1188	125	1563	1750	1938	2125	2313	2500	2688	2875	3063				
143	101	74	46	18 x 24	3.00	1500	1950	2400	2850	300	3750	4200	4650	5100	5550	6000	6450	6900	7350				
188	133	96	59	21 x 24	3.50	1750	2275	2800	3325	350	4375	4900	5425	5950	6475	7000	7525	8050	8575				
161	114	82	51	24 x 18	3.00	1500	1950	2400	2850	300	3750	4200	4650	5100	5550	6000	6450	6900	7350				
200	141	102	63	24 x 24	4.00	2000	2600	3200	3800	400	5000	5600	6200	6800	7400	8000	8600	9200	9800				
238	168	122	75	24 x 30	5.00	2500	3250	4000	4750	500	6250	7000	7750	8500	9250	10000	10750	11500	12250				
276	195	142	88	24 x 36	6.00	3000	3900	4800	5700	600	7500	8400	9300	10200	11100	12000	12900	13800	14700				
212	150	108	67	27 x 24	4.50	2250	2925	3600	4275	450	5625	6300	6975	7650	8325	9000	9675	10350	11025				
140	99	71	44	30 x 12	2.50	1250	1625	2000	2375	250	3125	3500	3875	4250	4625	5000	5375	5750	6125				
225	159	115	71	30 x 24	5.00	2500	3250	4000	4750	500	6250	7000	7750	8500	9250	10000	10750	11500	12250				
266	188	137	85	30 x 30	6.25	3125	4063	5000	5938	625	7813	8750	9688	10625	11563	12500	13438	14375	15313				
308	218	158	98	30 x 36	7.50	3750	4875	6000	7125	750	9375	10500	11625	12750	13875	15000	16125	17250	18375				
281	198	143	89	33 x 30	6.88	3438	4469	5500	6531	688	8594	9625	10656	11688	12719	13750	14781	15813	16844				
203	143	104	65	36 x 18	4.50	2250	2925	3600	4275	450	5625	6300	6975	7650	8325	9000	9675	10350	11025				
248	176	128	79	36 x 24	6.00	3000	3900	4800	5700	600	7500	8400	9300	10200	11100	12000	12900	13800	14700				
294	209	151	94	36 x 30	7.50	3750	4875	6000	7125	750	9375	10500	11625	12750	13875	15000	16125	17250	18375				
340	241	175	108	36 x 36	9.00	4500	5850	7200	8550	900	11250	12600	13950	15300	16650	18000	19350	20700	22050				

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 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).**

**Sound Solutions
for a Noisy World!**

3900 Dr. Greaves Rd.
Kansas City, MO 64030
(816) 761-7476
FAX (816) 763-0986
<http://www.ruskinsound.com>

