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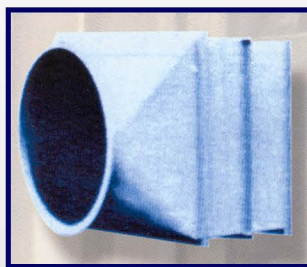
**Performance Data**

# SONO-CON SILENCERS

REDUCE INTAKE AND EXHAUST NOISE



ROUND



RECTANGULAR



HEAVY DUTY



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1-800-241-4207

# GAS TURBINE SILENCING

## GAS TURBINE SILENCING

### **SonoCon Splitter Silencers**

*An innovative silencer concept engineered for use in applications which require high volume flow rates. Constructed of heavy duty steel or aluminum, the splitters are self-supporting to minimize structural requirements and are installed in steel or concrete shells erected of panelized or conventional constructions.*

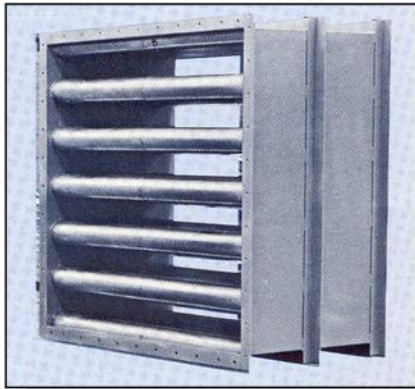


Splitter arrangements are configured in accordance with PHOENIX-E standard designs. Materials are selected to match temperature, gas and corrosion requirements.

Though ideal for high temperature turbine exhaust and intake applications, SonoCon splitters are cost effective methods to reduce noise in any application which requires the handling of large volumes of gas.



**SONO-CON  
SILENCERS  
Model HP**



**MODEL HP**  
RECTANGULAR

**NOMENCLATURE EXAMPLE:**

WIDTH	HEIGHT	LENGTH	MODEL
<b>24</b>	<b>24</b>	<b>3</b>	<b>HP</b>

Model HP Silencers provide greatest overall attenuation throughout the audible frequency spectrum. These silencers are often used in critical industrial noise control applications.

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
<b>3HP</b>	-1500	6	10	19	28	39	43	25	16
	-1000	6	10	18	27	39	42	25	16
	0	6	7	17	26	37	43	26	13
	+1000	7	7	16	24	35	42	28	17
	+1500	6	6	16	23	34	42	29	17
<b>5HP</b>	-1500	9	17	36	46	48	40	34	22
	-1000	8	16	33	45	51	44	41	22
	0	7	13	29	42	58	62	45	25
	+1000	6	12	26	40	57	60	48	27
	+1500	6	12	25	39	54	51	45	28
<b>7HP</b>	-1500	10	24	41	43	47	48	37	30
	-1000	10	23	40	48	51	52	48	34
	0	9	19	38	47	59	63	55	34
	+1000	8	16	36	47	59	62	55	39
	+1500	8	16	34	46	57	55	46	36
<b>10HP</b>	-1500	12	36	46	50	50	44	35	35
	-1000	11	34	46	58	57	47	47	40
	0	10	29	44	58	64	64	59	45
	+1000	10	26	43	58	63	63	58	49
	+1500	9	25	42	60	64	57	54	50

THIS TABLE CONTAINS BOTH FORWARD (+) AND REVERSE (-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS BASED ON TEST RESULTS MEASURED IN ACCORDANCE WITH ASTM E477. COPIES OF THESE TEST REPORTS CAN BE FURNISHED UPON REQUEST.

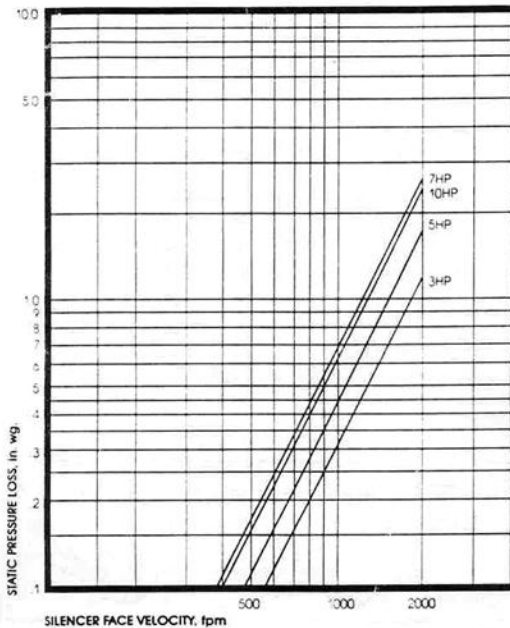
# SonoCon Silencers

# Model HP

## ENGINEERING DATA

AIR FLOW RATING FOR THE 12 x 12 SIZE. **■** REPRESENTS BOTH CFM AND FACE VELOCITY IN FPM. USE THIS TO GET THE RATING FOR MULTIPLE MODULE SILENCERS.

MODEL	3HP	0.07	0.11	0.16	0.21	0.24	0.28	0.32	0.41	0.51	0.71	0.95	1.19
	5HP	0.09	0.16	0.23	0.29	0.35	0.39	0.45	0.58	0.71	1.00	1.32	1.65
7HP	0.14	0.23	0.34	0.44	0.52	0.59	0.68	0.89	1.10	1.52	2.04	2.54	
10HP	0.13	0.22	0.31	0.37	0.44	0.50	0.58	0.75	0.94	1.30	1.73	2.11	
SIZE W x H	FACE AREA	AIR FLOW IN CFM											
		6 x 12	0.50	227	297	354	402	438	465	500	569	630	743
6 x 24	1.00	454	594	707	804	875	930	1000	1138	1260	1485	1715	1917
6 x 36	1.50	681	891	1061	1206	1313	1395	1500	1707	1890	2228	2573	2876
12 x 12	1.00	454	594	707	804	875	930	1000	1138	1260	1485	1715	1917
12 x 24	2.00	908	1188	1414	1608	1750	1860	2000	2276	2520	2970	3430	3834
12 x 36	3.00	1362	1782	2121	2412	2625	2790	3000	3414	3780	4455	5145	5751
18 x 12	1.50	681	891	1061	1206	1313	1395	1500	1707	1890	2228	2573	2876
18 x 18	2.25	1022	1337	1591	1809	1969	2093	2250	2561	2835	3341	3859	4313
18 x 30	3.75	1703	2228	2651	3015	3281	3488	3750	4268	4725	5569	6431	7189
18 x 36	4.50	2043	2673	3182	3618	3938	4185	4500	5121	5670	6683	7718	8627
18 x 48	6.00	2724	3564	4242	4824	5250	5580	6000	6828	7560	8910	10290	11502
24 x 24	4.00	1816	2376	2828	3216	3500	3720	4000	4552	5040	5940	6860	7668
24 x 36	6.00	2724	3564	4242	4824	5250	5580	6000	6828	7560	8910	10290	11502
24 x 48	8.00	3632	4752	5656	6432	7000	7440	8000	9104	10080	11880	13720	15336
30 x 24	5.00	2270	2970	3535	4020	4375	4650	5000	5690	6300	7425	8575	9585
30 x 36	7.50	3405	4455	5303	6030	6563	6975	7500	8535	9450	11138	12863	14378
30 x 48	10.00	4540	5940	7070	8040	8750	9300	10000	11380	12600	14850	17150	19170
36 x 36	9.00	4086	5346	6363	7236	7875	8370	9000	10242	11340	13365	15435	17253
36 x 42	10.50	4767	6237	7424	8442	9188	9765	10500	11949	13230	15593	18008	20129
36 x 48	12.00	5448	7128	8484	9648	10500	11160	12000	13656	15120	17820	20580	23004



Air flow ratings shown include static regain. Therefore if silencers are installed immediately before or after elbows, transitions, at the intake or discharge of the system, or without duct, allowance to compensate for such conditions must be included when calculating the operating pressure loss thru the silencer. Failure to make allowance for these conditions can add several velocity heads to the pressure loss of the system. All acoustic and aerodynamic performance obtained on 24" x 24" cross section production units.


### SELF-GENERATED SOUND POWER RATINGS (PWL) dB re 10<sup>-12</sup> WATTS

OCTAVE BAND		1	2	3	4	5	6	7	8
Hz		63	125	250	500	1000	2000	4000	8000
MODEL	FACE VELOCITY								
3HP	+1500	63	60	54	51	48	55	55	52
5HP	+1000	55	50	42	40	41	44	39	36
7HP	-1000	54	51	50	53	55	59	54	46
10HP	-1500	62	57	54	57	59	63	67	60

### SELF-GENERATED SOUND RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.50	1	2	4	8	10	32	64	128
PWL ADJUSTMENT FACTOR, dB	-9	-6	-3	0	+3	+6	+9	+12	+15

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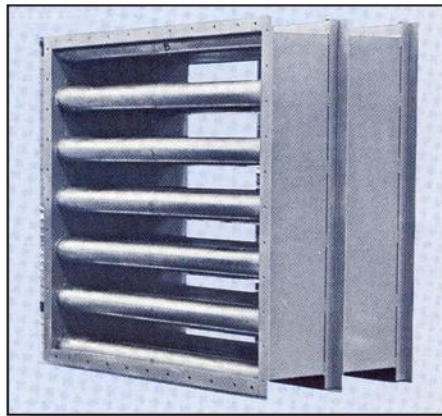
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**SONO-CON  
SILENCERS  
Model HP-LF**



**MODEL HP-LF**  
RECTANGULAR

**NOMENCLATURE EXAMPLE:**

WIDTH	HEIGHT	LENGTH	MODEL
24	24	36	HP-LF

*The HP-LF series provides superior low and mid-frequency sound attenuation. These utilize an airfoil design for efficient aerodynamic performance. They are constructed of galvanized materials and superior acoustical materials for long service life.*

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
3HP-LF	-1500	9	14	24	28	28	21	18	13
	-1000	8	14	23	27	29	18	19	13
	0	8	11	23	26	27	18	19	13
	+1000	9	12	22	24	26	20	18	14
	+1500	9	11	20	23	24	19	18	14
5HP-LF	-1500	15	23	36	39	40	29	21	14
	-1000	15	20	35	39	40	29	21	15
	0	14	20	34	38	39	28	23	19
	+1000	12	18	30	36	38	28	23	18
	+1500	10	17	27	34	35	29	22	18
7HP-LF	-1500	15	32	43	50	54	34	24	19
	-1000	15	30	43	48	53	34	26	19
	0	13	27	41	47	50	34	26	22
	+1000	12	23	40	47	51	38	27	23
	+1500	12	21	39	46	49	39	28	24
10HP-LF	-1500	22	32	48	52	53	44	28	18
	-1000	22	32	49	52	53	44	31	21
	0	22	30	48	52	52	44	32	22
	+1000	20	28	47	51	51	45	35	23
	+1500	18	28	46	51	52	46	35	24

THIS TABLE CONTAINS BOTH FORWARD (+) AND REVERSE (-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS BASED ON COMPARATIVE TEST RESULTS MEASURED IN ACCORDANCE WITH ASTM E477. COPIES OF CERTAIN TEST REPORTS CAN BE FURNISHED UPON REQUEST.

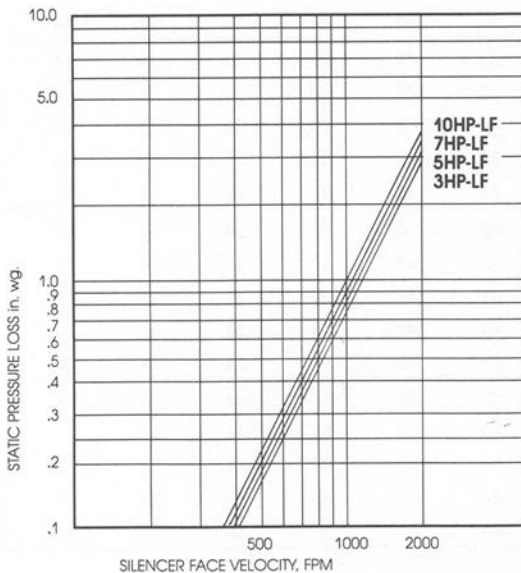
## ENGINEERING DATA

AIR FLOW RATING FOR THE 12 x 12 SIZE, SHADED, REPRESENTS BOTH CFM AND FACE VELOCITY IN FPM. USE THIS TO GET THE RATING FOR MULTIPLE MODULE SILENCERS.

MODEL	3HP-LF	0.13	0.22	0.30	0.39	0.47	0.53	0.61	0.79	0.97	1.35	1.79	2.24
	5HP-LF	0.14	0.24	0.34	0.44	0.52	0.59	0.68	0.88	1.08	1.50	2.00	2.50
7HP-LF	0.15	0.25	0.36	0.47	0.55	0.62	0.72	0.93	1.14	1.59	2.18	2.65	
10HP-LF	0.18	0.31	0.44	0.57	0.67	0.76	0.88	1.14	1.40	1.94	2.59	3.23	

SIZE W x H	FACE AREA	AIR FLOW IN CFM											
6 x 12	0.50	227	297	354	402	438	465	500	569	630	743	858	959
6 x 24	1.00	454	594	707	804	875	930	1000	1138	1260	1485	1715	1917
6 x 36	1.50	681	891	1061	1206	1313	1395	1500	1707	1890	2228	2573	2876
<b>12 x 12</b>	<b>1.00</b>	<b>454</b>	<b>594</b>	<b>707</b>	<b>804</b>	<b>875</b>	<b>930</b>	<b>1000</b>	<b>1138</b>	<b>1260</b>	<b>1485</b>	<b>1715</b>	<b>1917</b>
12 x 24	2.00	908	1188	1414	1608	1750	1860	2000	2276	2520	2970	3430	3834
12 x 36	3.00	1362	1782	2121	2412	2625	2790	3000	3414	3780	4455	5145	5751
18 x 12	1.50	681	891	1061	1206	1313	1395	1500	1707	1890	2228	2573	2876
18 x 18	2.25	1022	1337	1591	1809	1969	2093	2250	2561	2835	3341	3859	4313
18 x 30	3.75	1703	2228	2651	3015	3281	3488	3750	4268	4725	5569	6431	7189
18 x 36	4.50	2043	2673	3182	3618	3938	4185	4500	5121	5670	6683	7718	8627
18 x 48	6.00	2724	3564	4242	4824	5250	5580	6000	6828	7560	8910	10290	11502
24 x 24	4.00	1816	2376	2828	3216	3500	3720	4000	4552	5040	5940	6860	7668
24 x 36	6.00	2724	3564	4242	4824	5250	5580	6000	6828	7560	8910	10290	11502
24 x 48	8.00	3632	4752	5656	6432	7000	7440	8000	9104	10080	11880	13720	15336
30 x 24	5.00	2270	2970	3535	4020	4375	4650	5000	5690	6300	7425	8575	9585
30 x 36	7.50	3405	4455	5303	6030	6563	6975	7500	8535	9450	11138	12863	14378
30 x 48	10.00	4540	5940	7070	8040	8750	9300	10000	11380	12600	14850	17150	19170
36 x 36	9.00	4086	5346	6363	7236	7875	8370	9000	10242	11340	13365	15435	17253
36 x 42	10.50	4767	6237	7424	8442	9188	9765	10500	11949	13230	15593	18008	20129
36 x 48	12.00	5448	7128	8484	9648	10500	11160	12000	13656	15120	17820	20580	23004



Air flow ratings shown include static regain. Therefore if silencers are installed immediately before or after elbows, transitions, at the intake or discharge of the system, or without duct, allowance to compensate for such conditions must be included when calculating the operating pressure loss thru the silencer. Failure to make allowance for these conditions can add several velocity heads to the pressure loss of the system. All acoustic and aerodynamic performance obtained on 24" x 24" cross section production units.


### SELF-GENERATED SOUND POWER RATINGS (PWL) dB re 10<sup>-12</sup> WATTS

OCTAVE BAND		1	2	3	4	5	6	7	8
Hz		63	125	250	500	1000	2000	4000	8000
MODEL	FACE VELOCITY								
3HP-LF	+1500	60	58	57	53	51	55	52	42
5HP-LF	+1000	53	50	46	42	41	44	37	31
7HP-LF	-1000	49	47	47	48	51	54	46	32
10HP-LF	-1500	60	56	54	54	56	60	58	48

### SELF-GENERATED SOUND RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.50	1	2	4	8	10	32	64	128
PWL ADJUSTMENT FACTOR, dB	-9	-6	-3	0	+3	+6	+9	+12	+15

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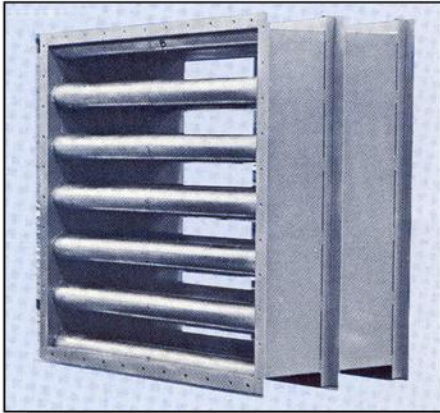
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**SONO-CON  
SILENCERS  
Model SP**



**MODEL SP**  
RECTANGULAR

**NOMENCLATURE EXAMPLE:**

WIDTH	HEIGHT	LENGTH	MODEL
24	24	3	SP

*The SP series provide middle frequency and high frequency sound attenuation with modest pressure loss. These utilize an airfoil design for efficient aerodynamic performance. They are constructed of galvanized materials and superior acoustical materials for long service life.*

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
<b>3SP</b>	-2000	2	7	15	21	31	33	19	12
	-1000	2	6	13	20	29	33	19	12
	0	1	5	12	19	28	34	21	14
	+1000	1	5	12	18	26	33	23	14
	+2000	0	4	11	17	25	33	23	14
<b>5SP</b>	-2000	4	11	24	37	44	46	24	15
	-1000	3	10	22	36	49	49	25	16
	0	4	8	21	34	48	52	26	14
	+1000	3	7	19	32	46	52	27	16
	+2000	3	7	18	30	43	52	28	16
<b>7SP</b>	-2000	7	16	34	48	49	40	30	15
	-1000	6	13	31	47	53	53	32	16
	0	6	12	28	45	58	62	36	19
	+1000	6	11	26	43	58	62	39	21
	+2000	5	10	24	42	55	53	40	22
<b>10SP</b>	-2000	6	25	36	40	43	37	35	19
	-1000	6	21	38	46	49	47	45	20
	0	8	17	32	44	57	64	53	31
	+1000	8	16	31	44	57	64	55	33
	+2000	7	13	31	45	52	49	52	31

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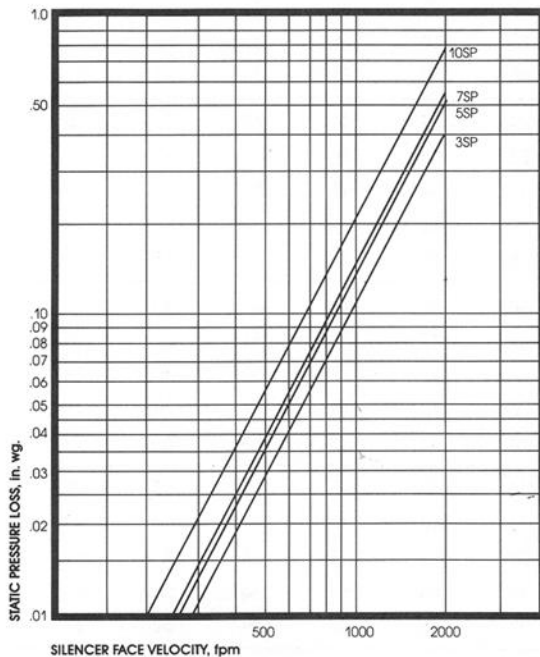
## ENGINEERING DATA

AIR FLOW RATING FOR THE 12 x 12 SIZE, SHADED, REPRESENTS BOTH CFM AND FACE VELOCITY IN FPM. USE THIS TO GET THE RATING FOR MULTIPLE MODULE SILENCERS.

MODEL	3SP	0.05	0.10	0.16	0.21	0.31	0.41	0.51	0.60	0.75	0.89	1.00	1.08
	5SP	0.06	0.11	0.18	0.25	0.38	0.51	0.64	0.75	0.94	1.12	1.26	1.36
7SP	0.07	0.12	0.18	0.26	0.39	0.53	0.66	0.78	0.97	1.16	1.30	1.40	
10SP	0.09	0.17	0.27	0.39	0.58	0.77	0.96	1.14	1.42	1.70	1.90	2.06	

SIZE W x H	FACE AREA	AIR FLOW IN CFM											
		345	477	600	713	875	1012	1130	1230	1371	1500	1588	1650
6 x 12	0.50	345	477	600	713	875	1012	1130	1230	1371	1500	1588	1650
6 x 24	1.00	707	953	1200	1425	1750	2023	2260	2459	2742	2999	3175	3300
6 x 36	1.50	1061	1430	1800	2183	2625	3035	3390	3689	4113	4499	4763	4950
12 x 12	1.00	707	953	1200	1425	1750	2023	2260	2459	2742	2999	3175	3300
12 x 24	2.00	1414	1906	2400	2850	3500	4046	4520	4918	5484	5998	6350	6600
12 x 36	3.00	2121	2859	3600	4275	5250	6069	6780	7377	8226	8997	9525	9900
18 x 12	1.50	1061	1430	1800	2138	2625	3035	3390	3689	4113	4499	4763	4950
18 x 18	2.25	1591	2144	2700	3206	3938	4552	5085	5533	6170	6748	7144	7425
18 x 30	3.75	2651	3574	4500	5344	6563	7586	8475	9221	10283	11246	11906	12375
18 x 36	4.50	3182	4289	5400	6413	7875	9104	10170	11066	12339	13496	14288	14850
18 x 48	6.00	4242	5718	7200	8550	10500	12138	13560	14754	16452	17994	19050	19800
24 x 24	4.00	2828	3812	4800	5700	7000	8092	9040	9836	10968	11996	12700	13200
24 x 36	6.00	4242	5718	7200	8550	10500	12138	13560	14754	16452	17994	19050	19800
24 x 48	8.00	5656	7624	9600	11400	14000	16184	18080	19672	21936	23992	25400	26400
30 x 24	5.00	3535	4765	6000	7125	8750	10115	11300	12295	13710	14995	15875	16500
30 x 36	7.50	5303	7148	9000	10638	13125	15173	16950	18443	20565	22493	23813	24750
30 x 48	10.00	7070	9530	12000	14250	17500	20230	22600	24590	27420	29990	31750	33000
36 x 36	9.00	6363	8577	10800	12825	15750	18207	20340	22131	24678	26991	28575	29700
36 x 42	10.50	7424	10007	12600	14963	18375	21242	23730	25820	28791	31490	33338	34650
36 x 48	12.00	8484	11436	14400	17100	21000	24276	27120	29508	32904	35988	38100	39600



Air flow ratings shown include static regain. Therefore if silencers are installed immediately before or after elbows, transitions, at the intake or discharge of the system, or without duct, allowance to compensate for such conditions must be included when calculating the operating pressure loss thru the silencer. Failure to make allowance for these conditions can add several velocity heads to the pressure loss of the system. All acoustic and aerodynamic performance obtained on 24" x 24" cross section production units.

### SELF-GENERATED SOUND POWER RATINGS (PWL) dB re 10<sup>-12</sup> WATTS

OCTAVE BAND		1	2	3	4	5	6	7	8
Hz		63	125	250	500	1000	2000	4000	8000
MODEL	FACE VELOCITY								
3SP	+2000	62	57	52	48	47	51	51	48
5SP	+1000	51	42	34	31	33	28	24	29
7SP	-1000	53	46	44	47	51	52	43	34
10SP	-2000	63	57	55	56	58	64	66	59

### SELF-GENERATED SOUND RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.50	1	2	4	8	10	32	64	128
PWL ADJUSTMENT FACTOR, dB	-9	-6	-3	0	+3	+6	+9	+12	+15

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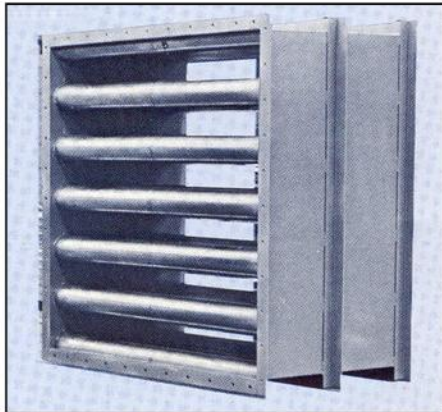
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**SONO-CON  
SILENCERS  
Model SP-LF**



**MODEL SP-LF**

RECTANGULAR

**NOMENCLATURE EXAMPLE:**

WIDTH	HEIGHT	LENGTH	MODEL
24	24	36	SP-LF

*The SP-LF series provides low and mid-frequency sound attenuation with modest pressure loss. These utilize an airfoil design for efficient aerodynamic performance. They are constructed of galvanized materials and superior acoustical materials for long service life.*

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
3SP-LF	-1500	7	8	17	21	18	15	10	9
	-1000	6	8	17	20	18	14	11	10
	0	6	7	16	19	16	14	11	10
	+1000	5	7	15	18	16	13	11	10
	+1500	4	6	15	17	15	12	10	10
5SP-LF	-1500	12	14	28	31	30	17	15	11
	-1000	11	14	27	30	29	17	15	12
	0	10	13	26	29	28	16	13	11
	+1000	9	12	24	28	27	16	12	11
	+1500	8	12	23	27	26	17	12	12
7SP-LF	-1500	14	19	33	44	43	22	16	13
	-1000	15	18	32	44	42	21	16	15
	0	15	16	30	43	43	22	15	13
	+1000	14	15	29	42	42	23	15	13
	+1500	14	15	27	40	42	23	16	14
10SP-LF	-1500	19	25	43	52	54	27	20	15
	-1000	18	24	42	52	54	28	22	16
	0	17	23	41	51	53	28	21	16
	+1000	17	23	40	50	52	30	22	17
	+1500	17	22	38	49	51	30	23	18

THIS TABLE CONTAINS BOTH FORWARD (+) AND BACKWARD (-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS BASED ON TEST RESULTS MEASURED IN ACCORDANCE WITH ASTM E477. COPIES OF THESE TEST REPORTS CAN BE FURNISHED UPON REQUEST.

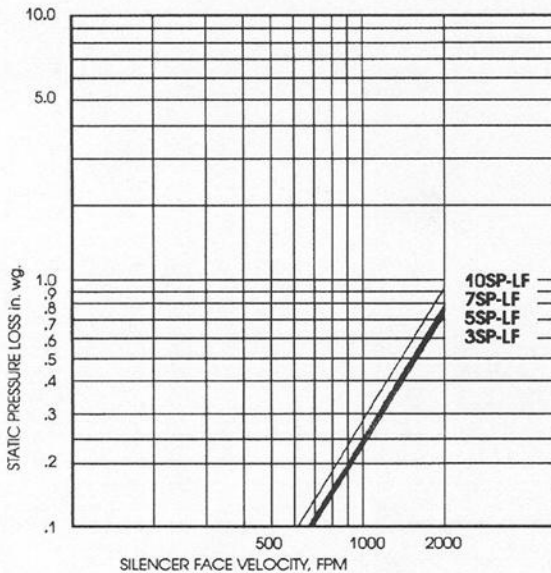
# SonoCon Silencers

# Model SP-LF

## ENGINEERING DATA

AIR FLOW RATING FOR THE 12 X 12 SIZE, SHADED, REPRESENTS BOTH CFM AND FACE VELOCITY IN FPM. USE THIS TO GET THE RATING FOR MULTIPLE MODULE SILENCERS.

MODEL	3SP-LF	0.04	0.07	0.10	0.13	0.15	0.17	0.20	0.26	0.32	0.44	0.59	0.73
	5SP-LF	0.04	0.07	0.10	0.14	0.16	0.18	0.21	0.27	0.33	0.46	0.62	0.77
7SP-LF	0.05	0.08	0.11	0.14	0.17	0.19	0.22	0.28	0.35	0.49	0.65	0.81	
10SP-LF	0.05	0.09	0.12	0.16	0.19	0.22	0.25	0.32	0.40	0.56	0.74	0.92	
SIZE W x H	FACE AREA	AIR FLOW IN CFM											
6 x 12	0.50	227	297	354	402	438	465	500	569	630	743	858	959
6 x 24	1.00	454	594	707	804	875	930	1000	1138	1260	1485	1715	1917
6 x 36	1.50	681	891	1061	1206	1313	1395	1500	1707	1890	2228	2573	2876
<b>12 x 12</b>	<b>1.00</b>	<b>454</b>	<b>594</b>	<b>707</b>	<b>804</b>	<b>875</b>	<b>930</b>	<b>1000</b>	<b>1138</b>	<b>1260</b>	<b>1485</b>	<b>1715</b>	<b>1917</b>
12 x 24	2.00	908	1188	1414	1608	1750	1860	2000	2276	2520	2970	3430	3834
12 x 36	3.00	1362	1782	2121	2412	2625	2790	3000	3414	3780	4455	5145	5751
18 x 12	1.50	681	891	1061	1206	1313	1395	1500	1707	1890	2228	2573	2876
18 x 18	2.25	1022	1337	1591	1809	1969	2093	2250	2561	2835	3341	3859	4313
18 x 30	3.75	1703	2228	2651	3015	3281	3488	3750	4268	4725	5569	6431	7189
18 x 36	4.50	2043	2673	3182	3618	3938	4185	4500	5121	5670	6683	7718	8627
18 x 48	6.00	2724	3564	4242	4824	5250	5580	6000	6828	7560	8910	10290	11502
24 x 24	4.00	1816	2376	2828	3216	3500	3720	4000	4552	5040	5940	6860	7668
24 x 36	6.00	2724	3564	4242	4824	5250	5580	6000	6828	7560	8910	10290	11502
24 x 48	8.00	3632	4752	5656	6432	7000	7440	8000	9104	10080	11880	13720	15336
30 x 24	5.00	2270	2970	3535	4020	4375	4650	5000	5690	6300	7425	8575	9585
30 x 36	7.50	3405	4455	5303	6030	6563	6975	7500	8535	9450	11138	12863	14378
30 x 48	10.00	4540	5940	7070	8040	8750	9300	10000	11380	12600	14850	17150	19170
36 x 36	9.00	4086	5346	6363	7236	7875	8370	9000	10242	11340	13365	15435	17253
36 x 42	10.50	4767	6237	7424	8442	9188	9765	10500	11949	13230	15593	18008	20129
36 x 48	12.00	5448	7128	8484	9648	10500	11160	12000	13656	15120	17820	20580	23004



Air flow ratings shown include static regain. Therefore if silencers are installed immediately before or after elbows, transitions, at the intake or discharge of the system, or without duct, allowance to compensate for such conditions must be included when calculating the operating pressure loss thru the silencer. Failure to make allowance for these conditions can add several velocity heads to the pressure loss of the system. All acoustic and aerodynamic performance obtained on 24" x 24" cross section production units.

### SELF-GENERATED SOUND POWER RATINGS (PWL) dB re 10<sup>-12</sup> WATTS

OCTAVE BAND		1	2	3	4	5	6	7	8
HZ		63	125	250	500	1000	2000	4000	8000
MODEL	FACE VELOCITY								
3SP-LF	+1500	55	54	59	57	53	55	54	49
5SP-LF	+1000	46	35	38	37	42	38	28	22
7SP-LF	-1000	47	42	41	44	46	45	36	28
10SP-LF	-1500	54	53	55	56	57	60	60	53

### SELF-GENERATED SOUND RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.50	1	2	4	8	10	32	64	128
PWL ADJUSTMENT FACTOR, dB	-9	-6	-3	0	+3	+6	+9	+12	+15

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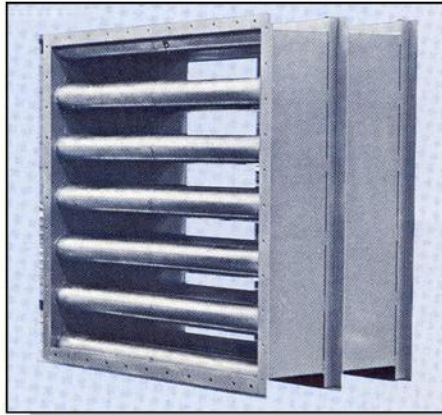
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**SONO-CON  
SILENCERS  
Model MP**



**MODEL MP**  
RECTANGULAR

**NOMENCLATURE EXAMPLE:**

WIDTH	HEIGHT	LENGTH	MODEL
<b>24</b>	<b>24</b>	<b>3</b>	<b>MP</b>

*The MP series provides significant mid-frequency sound attenuation with modest static pressure loss.*

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
<b>3MP</b>	-1500	1	5	12	23	32	27	14	8
	-1000	0	4	12	22	32	27	13	8
	0	1	4	11	21	31	28	15	10
	+1000	0	4	10	20	29	29	16	11
	+2000	0	3	9	19	28	29	17	10
<b>5MP</b>	-1500	2	8	19	39	46	48	19	11
	-1000	3	7	18	37	48	40	20	11
	0	3	5	16	35	49	42	22	14
	+1000	3	5	15	33	47	43	23	14
	+2000	2	5	14	31	45	42	23	15
<b>7MP</b>	-1500	3	16	31	43	45	41	31	18
	-1000	3	14	28	45	50	48	34	18
	0	3	12	25	45	55	45	37	22
	+1000	2	11	23	43	53	46	39	23
	+2000	2	11	22	41	52	46	40	25
<b>10MP</b>	-1500	4	16	38	46	49	44	36	18
	-1000	4	14	37	47	54	55	37	18
	0	8	14	29	42	56	60	43	23
	+1000	8	14	28	42	55	62	46	26
	+2000	5	11	31	44	53	51	46	26

THIS TABLE CONTAINS BOTH FORWARD (+) AND REVERSE (-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS BASED ON TEST RESULTS MEASURED IN ACCORDANCE WITH ASTM E477. COPIES OF THESE TEST REPORTS CAN BE FURNISHED UPON REQUEST.

# SonoCon Silencers

# Model MP

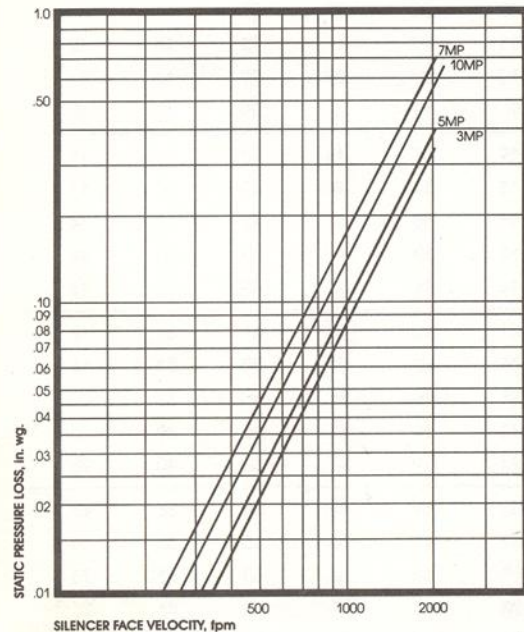
## ENGINEERING DATA

AIR FLOW RATING FOR THE 12 x 12 SIZE, SHADED, REPRESENTS BOTH CFM AND FACE VELOCITY IN FPM. USE THIS TO GET THE RATING FOR MULTIPLE MODULE SILENCERS.

MODEL	3MP	0.09	0.16	0.23	0.31	0.46	0.61	0.76	0.92	1.15	1.38	1.54	1.69
	5MP	0.10	0.20	0.27	0.37	0.54	0.73	0.91	1.09	1.37	1.64	1.82	2.00
7MP	0.17	0.34	0.52	0.69	1.06	1.41	1.76	2.11	2.64	3.17	3.52	3.87	
10MP	0.14	0.28	0.41	0.55	0.83	1.11	1.39	1.67	2.09	2.50	2.78	3.06	

SIZE W x H	FACE AREA	AIR FLOW IN CFM											
6 x 12	0.50	500	707	866	1000	1225	1414	1581	1732	1937	2122	2236	2345
6 x 24	1.00	1000	1414	1732	2000	2449	2828	3162	3464	3873	4243	4472	4690
6 x 36	1.50	1500	2121	2598	3000	3674	4242	4743	5196	5810	6365	6708	7035
12 x 12	1.00	1000	1414	1732	2000	2449	2828	3162	3464	3873	4243	4472	4690
12 x 24	2.00	2000	2828	3464	4000	4898	5656	6324	6928	7746	8486	8944	9380
12 x 36	3.00	3000	4242	5196	6000	7347	8484	9486	10392	11619	12729	13416	14070
18 x 12	1.50	1500	2121	2598	3000	3674	4242	4743	5196	5810	6365	6708	7035
18 x 18	2.25	2250	3182	3897	4500	5510	6363	7115	7794	8714	9547	10062	10553
18 x 30	3.75	3750	5303	6495	7500	9184	10605	11858	12990	14524	15911	16770	17588
18 x 36	4.50	4500	6363	7794	9000	11021	12726	14229	15588	17429	19094	20124	21105
18 x 48	6.00	6000	8484	10392	12000	14694	16968	18972	20784	23238	25458	26832	28140
24 x 24	4.00	4000	5656	6928	8000	9796	11312	12648	13856	15492	16972	17888	18760
24 x 36	6.00	6000	8484	10392	12000	14694	16968	18972	20784	23238	25458	26832	28140
24 x 48	8.00	8000	11312	13856	16000	19592	22624	25296	27712	30984	33944	35776	37520
30 x 24	5.00	5000	7070	8660	10000	12245	14140	15810	17320	19365	21215	22360	23450
30 x 36	7.50	7500	10605	12990	15000	18368	21210	23715	25980	29048	31823	33540	35175
30 x 48	10.00	10000	14140	17320	20000	24490	28280	31620	34640	38730	42430	44720	46900
36 x 36	9.00	9000	12726	15588	18000	22041	25452	28458	31176	34857	38187	40248	42210
36 x 42	10.50	10500	14847	18186	21000	25715	29694	33201	36372	40667	44552	46956	49245
36 x 48	12.00	12000	16968	20784	24000	29388	33936	37944	41568	46476	50916	53664	56280



Air flow ratings shown include static regain. Therefore if silencers are installed immediately before or after elbows, transitions, at the intake or discharge of the system, or without duct, allowance to compensate for such conditions must be included when calculating the operating pressure loss thru the silencer. Failure to make allowance for these conditions can add several velocity heads to the pressure loss of the system. All acoustic and aerodynamic performance obtained on 24" x 24" cross section production units.

### SELF-GENERATED SOUND POWER RATINGS (PWL) dB re 10<sup>-12</sup> WATTS

OCTAVE BAND		1	2	3	4	5	6	7	8
Hz		63	125	250	500	1000	2000	4000	8000
MODEL	FACE VELOCITY								
3MP	+2000	59	56	52	48	46	47	48	44
	+1000	48	39	38	34	29	27	25	27
5MP	-1000	50	51	50	47	51	52	43	36
	-2000	57	61	59	60	61	63	64	55
7MP									
10MP									

### SELF-GENERATED SOUND RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.50	1	2	4	8	10	32	64	128
PWL ADJUSTMENT FACTOR, dB	-9	-6	-3	0	+3	+6	+9	+12	+15

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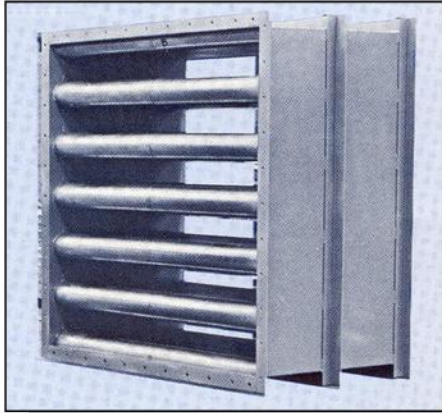
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**SONO-CON  
SILENCERS  
Model LP**



**MODEL LP**

RECTANGULAR

NOMENCLATURE EXAMPLE:

WIDTH	HEIGHT	LENGTH	MODEL
24	24	3	LP

*The LP series silencers provide significant mid-frequency sound attenuation with low pressure loss.*

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
<b>3LP</b>	-1500	2	5	10	17	25	25	13	8
	-1000	3	5	9	17	25	25	13	8
	0	2	4	9	17	24	25	14	9
	+1000	1	4	9	16	24	26	17	11
	+2000	0	3	9	16	23	26	17	10
<b>5LP</b>	-1500	2	7	16	34	46	35	18	12
	-1000	3	7	15	33	46	35	18	12
	0	3	4	13	31	44	37	19	12
	+1000	3	4	13	30	43	37	20	12
	+2000	2	4	12	28	41	38	20	12
<b>7LP</b>	-1500	2	8	19	44	49	43	19	10
	-1000	2	7	18	42	50	45	20	11
	0	2	6	16	39	55	47	23	13
	+1000	2	6	15	37	53	46	23	14
	+2000	1	5	14	35	52	47	24	14
<b>10LP</b>	-1500	7	12	26	53	59	58	36	23
	-1000	6	11	25	52	60	60	36	23
	0	5	10	24	49	60	59	35	21
	+1000	5	9	23	46	60	60	36	22
	+2000	5	10	23	45	60	60	37	22

THIS TABLE CONTAINS BOTH FORWARD (+) AND REVERSE (-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS BASED ON TEST RESULTS MEASURED IN ACCORDANCE WITH ASTM E477. COPIES OF THESE TEST REPORTS CAN BE FURNISHED UPON REQUEST.

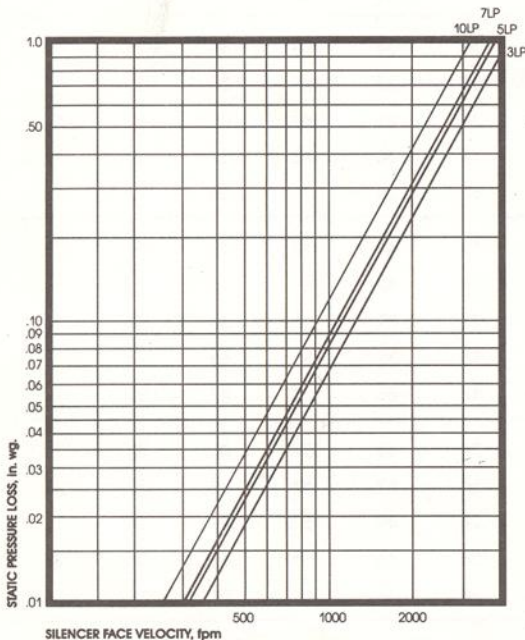
# SonoCon Silencers

# Model LP

## ENGINEERING DATA

AIR FLOW RATING FOR THE 12 x 12 SIZE, SHADED, REPRESENTS BOTH CFM AND FACE VELOCITY IN FPM. USE THIS TO GET THE RATING FOR MULTIPLE MODULE SILENCERS.

MODEL	3LP	0.05	0.10	0.15	0.20	0.30	0.40	0.50	0.60	0.75	0.90	1.00	1.10
	5LP	0.06	0.13	0.20	0.28	0.42	0.56	0.70	0.84	1.05	1.27	1.40	1.55
SIZE W x H	7LP	0.07	0.14	0.21	0.31	0.47	0.62	0.78	0.94	1.17	1.40	1.56	1.72
	10LP	0.10	0.20	0.30	0.46	0.67	0.94	1.17	1.41	1.76	2.11	2.34	2.58
		FACE AREA	AIR FLOW IN CFM										
6 x 12	0.50	457	646	791	976	1195	1398	1563	1712	1914	2097	2210	2318
6 x 24	1.00	913	1291	1581	1952	2390	2795	3125	3423	3827	4193	4419	4635
6 x 36	1.50	1370	1937	2372	2928	3585	4193	4688	5135	5741	6290	6629	6953
12 x 12	1.00	913	1291	1581	1952	2390	2795	3125	3423	3827	4193	4419	4635
12 x 24	2.00	1826	2582	3162	3904	4780	5590	6250	6846	7654	8386	8838	9270
12 x 36	3.00	2739	3873	4743	5856	7170	8385	9375	10269	11481	12579	13257	13905
18 x 12	1.50	1370	1937	2372	2928	3585	4193	4688	5135	5741	6290	6629	6953
18 x 18	2.25	2054	2905	3557	4392	5378	6289	7031	7702	8611	9434	9943	10429
18 x 30	3.75	3424	4841	5929	7320	8963	10481	11719	12836	14351	15724	16571	17381
18 x 36	4.50	4109	5810	7115	8784	10755	12578	14063	15404	17222	18869	19886	20858
18 x 48	6.00	5478	7746	9486	11712	14340	16770	18750	20538	22962	25158	26514	27810
24 x 24	4.00	3652	5164	6324	7808	9560	11180	12500	13692	15308	16772	17676	18540
24 x 36	6.00	5478	7746	9486	11712	14340	16770	18750	20538	22962	25158	26514	27810
24 x 48	8.00	7304	10328	12648	15616	19120	22360	25000	27384	30616	33544	35352	37080
30 x 24	5.00	4565	6455	7905	9760	11950	13975	15625	17115	19135	20965	22095	23175
30 x 36	7.50	6848	9683	11858	14640	17925	20963	23438	25673	28703	31448	33143	34763
30 x 48	10.00	9130	12910	15810	19520	23900	27950	31250	34230	38270	41930	44190	46350
36 x 36	9.00	8217	11619	14229	17568	21510	25155	28125	30807	34443	37737	39771	41715
36 x 42	10.50	9587	13556	16601	20496	25095	29348	32813	35942	40184	44027	46400	48668
36 x 48	12.00	10956	15492	18972	23424	28680	33540	37500	41076	45924	50316	53028	55620



Air flow ratings shown include static regain. Therefore if silencers are installed immediately before or after elbows, transitions, at the intake or discharge of the system, or without duct, allowance to compensate for such conditions must be included when calculating the operating pressure loss thru the silencer. Failure to make allowance for these conditions can add several velocity heads to the pressure loss of the system. All Acoustic and aero dynamic performance was obtained on 24" x 24" cross section production units.


### SELF-GENERATED SOUND POWER RATINGS (PWL) dB re 10<sup>-12</sup> WATTS

OCTAVE BAND		1	2	3	4	5	6	7	8
Hz		63	125	250	500	1000	2000	4000	8000
MODEL	FACE VELOCITY								
3LP	+2000	60	55	51	47	45	50	48	43
5LP	+1000	53	40	35	32	33	26	24	30
7LP	-1000	52	42	40	42	40	37	28	30
10LP	-2000	64	56	54	53	56	63	59	51

### SELF-GENERATED SOUND RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.50	1	2	4	8	10	32	64	128
PWL ADJUSTMENT FACTOR, dB	-9	-6	-3	0	+3	+6	+9	+12	+15

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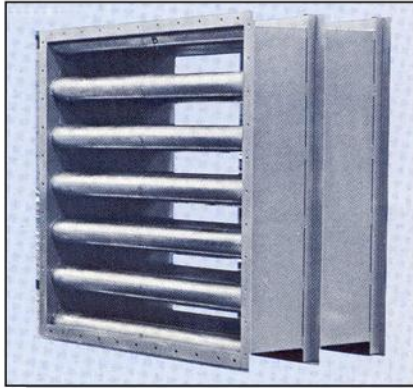
**SONO-CON  
SILENCERS  
Model LP-LF**

**MODEL LP-LF**

RECTANGULAR

**NOMENCLATURE EXAMPLE:**

WIDTH	HEIGHT	LENGTH	MODEL
<b>24</b>	<b>24</b>	<b>36</b>	<b>LP-LF</b>



*The LP-LF series provides low frequency sound attenuation with modest pressure loss. These utilize an airfoil design for efficient aerodynamic performance. As standard, they are constructed of galvanized steel and superior acoustical materials for long service life.*

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
<b>3LP-LF</b>	-2000	4	8	11	18	20	17	14	13
	-1000	4	8	10	16	19	17	15	14
	0	3	7	10	15	18	15	14	13
	+1000	3	7	9	14	17	16	14	13
	+2000	2	6	8	13	17	16	14	13
<b>5LP-LF</b>	-2000	6	16	17	27	28	21	17	13
	-1000	6	15	16	25	27	22	16	15
	0	6	13	14	23	26	21	15	14
	+1000	6	13	14	22	25	21	15	14
	+2000	5	12	13	21	25	20	14	15
<b>7LP-LF</b>	-2000	9	20	23	34	36	29	22	15
	-1000	9	19	22	32	35	29	23	17
	0	8	18	21	30	34	28	22	16
	+1000	7	17	19	28	34	27	20	11
	+2000	7	16	18	26	33	26	19	12
<b>10LP-LF</b>	-2000	12	23	31	44	45	30	23	16
	-1000	12	22	31	43	45	30	24	16
	0	11	20	30	43	43	30	23	16
	+1000	10	20	29	42	42	29	21	15
	+2000	10	19	28	42	42	27	20	15

THIS TABLE CONTAINS BOTH FORWARD (+) AND REVERSE (-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS BASED ON COMPARATIVE TEST RESULTS MEASURED IN ACCORDANCE WITH ASTM E477. COPIES OF CERTAIN TEST REPORTS CAN BE FURNISHED UPON REQUEST.

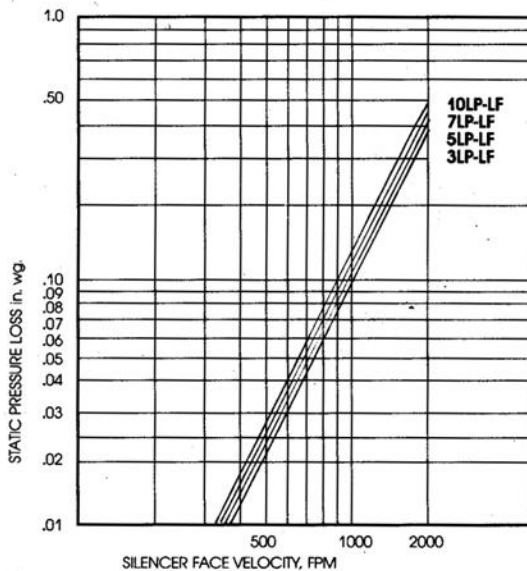
# SonoCon Silencers

# Model LP-LF

## ENGINEERING DATA

AIR FLOW RATING FOR THE 12 x 12 SIZE, SHADED, REPRESENTS BOTH CFM AND FACE VELOCITY IN FPM. USE THIS TO GET THE RATING FOR MULTIPLE MODULE SILENCERS.

MODEL	3LP-LF	0.07	0.14	0.21	0.32	0.48	0.66	0.82	0.98	1.23	1.48	1.64	1.80
	5LP-LF	0.08	0.15	0.22	0.34	0.51	0.70	0.88	1.05	1.32	1.58	1.76	1.93
	7LP-LF	0.09	0.17	0.25	0.39	0.58	0.80	1.00	1.20	1.49	1.79	1.99	2.19
	10LP-LF	0.10	0.19	0.28	0.44	0.65	0.89	1.11	1.34	1.67	2.00	2.23	2.45
SIZE W x H	FACE AREA	AIR FLOW IN CFM											
6 x 12	0.50	457	646	791	976	1195	1398	1563	1712	1914	2097	2210	2318
6 x 24	1.00	913	1291	1581	1952	2390	2795	3125	3423	3827	4193	4419	4635
6 x 36	1.50	1370	1937	2372	2928	3585	4193	4688	5135	5741	6290	6629	6953
12 x 12	1.00	913	1291	1581	1952	2390	2795	3125	3423	3827	4193	4419	4635
12 x 24	2.00	1826	2582	3162	3904	4780	5590	6250	6846	7654	8386	8838	9270
12 x 36	3.00	2739	3873	4743	5856	7170	8385	9375	10269	11481	12579	13257	13905
18 x 12	1.50	1370	1937	2372	2928	3585	4193	4688	5135	5741	6290	6629	6953
18 x 18	2.25	2054	2905	3557	4392	5378	6289	7031	7702	8611	9434	9943	10429
18 x 30	3.75	3424	4841	5929	7320	8963	10481	11719	12836	14351	15724	16571	17381
18 x 36	4.50	4109	5810	7115	8784	10755	12578	14063	15404	17222	18869	19886	20858
18 x 48	6.00	5478	7746	9486	11712	14340	16770	18750	20538	22962	25158	26514	27810
24 x 24	4.00	3652	5164	6324	7808	9560	11180	12500	13692	15308	16772	17676	18540
24 x 36	6.00	5478	7746	9486	11712	14340	16770	18750	20538	22962	25158	26514	27810
24 x 48	8.00	7304	10328	12648	15616	19120	22360	25000	27384	30616	33544	35352	37080
30 x 24	5.00	4565	6455	7905	9760	11950	13975	15625	17115	19135	20965	22095	23175
30 x 36	7.50	6848	9683	11858	14640	20963	23438	25673	28703	31448	34148	33143	34763
30 x 48	10.00	9130	12910	15810	19520	23900	27950	31250	34230	38270	41930	44190	46350
36 x 36	9.00	8217	11619	14229	17568	21510	25155	28125	30807	34443	37737	39771	41715
36 x 42	10.50	9587	13556	16601	20496	25095	29348	32813	35942	40184	44027	46400	48668
36 x 48	12.00	10956	15492	18972	23424	28680	33540	37500	41076	45924	50316	53028	55620



Air flow ratings shown include static regain. Therefore if silencers are installed immediately before or after elbows, transitions, at the intake or discharge of the system, or without duct, allowance to compensate for such conditions must be included when calculating the operating pressure loss thru the silencer. Failure to make allowance for these conditions can add several velocity heads to the pressure loss of the system. All acoustic and aerodynamic performance obtained on 24" x 24" cross section production units.

### SELF-GENERATED SOUND POWER RATINGS (PWL) dB re 10<sup>-12</sup> WATTS

MODEL	FACE VELOCITY	OCTAVE BAND							
		1	2	3	4	5	6	7	8
		Hz							
		63	125	250	500	1000	2000	4000	8000
3LP-LF	+2000	50	45	48	46	50	54	48	41
5LP-LF	+1000	43	36	39	38	35	36	27	27
7LP-LF	-1000	43	41	44	45	48	46	35	26
10LP-LF	-2000	50	49	52	53	54	58	53	46

### SELF-GENERATED SOUND RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.50	1	2	4	8	10	32	64	128
PWL ADJUSTMENT FACTOR, dB	-9	-6	-3	0	+3	+6	+9	+12	+15

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**SONO-CON  
CIRCULAR  
SILENCERS  
Model DS**



**MODEL DS**

CIRCULAR

**NOMENCLATURE EXAMPLE:**

DIAMETER	LENGTH	MODEL
24 Ø	48	DS-HP

*The DS series provides broad band attenuation with a modest static pressure drop.*

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
DS-HP	-4000	10	13	20	35	41	35	22	13
	-2000	9	12	18	34	38	36	23	16
	0	7	11	19	33	35	37	24	18
	+2000	6	11	19	32	34	38	25	19
	+4000	5	10	18	31	33	37	28	21
DS-MP	-4000	7	11	18	33	38	29	18	12
	-2000	6	10	17	30	35	30	19	15
	0	5	9	16	30	33	30	20	18
	+2000	5	8	17	25	31	30	21	18
	+4000	4	7	15	24	30	29	21	18
DS-LP	-4000	6	9	15	27	33	22	18	12
	-2000	5	8	13	26	32	23	19	12
	0	4	8	12	25	31	24	20	16
	+2000	4	7	12	25	30	24	20	16
	+4000	3	7	12	24	29	25	21	16

THIS TABLE CONTAINS BOTH FORWARD (+) AND REVERSE (-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS BASED ON COMPARATIVE TEST RESULTS MEASURED IN ACCORDANCE WITH ASTM E477. COPIES OF CERTAIN TEST REPORTS CAN BE FURNISHED UPON REQUEST.

# SonoCon Circular Silencers

# Model DS

## ENGINEERING DATA

### STATIC PRESSURE LOSS IN INCHES H<sub>2</sub>O

MODEL	DS-HP	0.15	0.26	0.40	0.58	0.78	1.01	1.27	1.54	1.86
	DS-MP	0.07	0.12	0.18	0.27	0.36	0.46	0.57	0.70	0.85
	DS-LP	0.06	0.10	0.16	0.23	0.31	0.40	0.50	0.61	0.74
	VELOCITY	1780	2350	2920	3490	4060	4635	5210	5775	6345
SIZE D x L	FACE AREA	AIR FLOW IN CFM								
12 x 36	0.79	1406	1857	2307	2757	3207	3662	4116	4562	5013
14 x 36	1.07	1905	2515	3124	3734	4344	4959	5575	6179	6789
16 x 36	1.40	2492	3290	4088	4886	5684	6489	7294	8085	8883
18 x 36	1.77	3151	4160	5168	6177	7186	8204	9222	10222	11231
20 x 40	2.18	3880	5123	6366	7608	8851	10104	11358	12590	13832
22 x 44	2.64	4699	6204	7709	9214	10718	12236	13754	15246	16751
24 x 48	3.14	5589	7379	9169	10959	12748	14554	16359	18134	19923
26 x 52	3.69	6568	8672	10775	12878	14981	17103	19225	21310	23413
28 x 56	4.28	7618	10058	12498	14937	17377	19838	22299	24717	27157
30 x 60	4.91	8740	11539	14337	17136	19935	22758	25581	28355	31154
32 x 64	5.58	9932	13113	16294	19474	22655	25863	29072	32225	35405
36 x 72	7.07	12585	16615	20644	24674	28704	32769	36835	40829	44859
40 x 80	8.73	15539	20516	25492	30468	35444	40464	45483	50416	55392
44 x 88	10.56	18797	24816	30835	36854	42874	48946	55018	60984	67003
48 x 96	12.57	22375	29540	36704	43869	51034	58262	65490	72529	79757
52 x 104	14.75	26255	34663	43070	51478	59885	68366	76848	85181	93589
56 x 112	17.10	30438	40185	49932	59679	69426	79259	89091	98753	108500
60 x 120	19.63	34941	46131	57320	68509	79698	90985	102272	113363	124552

AIR FLOW RATINGS SHOWN INCLUDE STATIC REGAIN. THEREFORE IF SILENCERS ARE INSTALLED IMMEDIATELY BEFORE OR AFTER ELBOWS, TRANSITIONS, AT THE INTAKE OR DISCHARGE OF THE SYSTEM, OR WITHOUT DUCT, ALLOWANCE TO COMPENSATE FOR SUCH CONDITIONS MUST BE INCLUDED WHEN CALCULATING THE OPERATING PRESSURE LOSS THRU THE SILENCER. FAILURE TO MAKE ALLOWANCE FOR THESE CONDITIONS CAN ADD SEVERAL VELOCITY HEADS TO THE PRESSURE LOSS OF THE SYSTEM.

### SELF-GENERATED SOUND POWER RATINGS (PWL) dB re 10<sup>-12</sup> WATTS

MODEL	OCTAVE BAND	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hz	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY								
DS-HP	-4000	62	63	64	63	62	64	64	62
	-2000	51	49	50	48	47	48	46	40
	+2000	57	55	49	48	47	47	41	33
	+4000	72	68	66	67	61	63	63	60
DS-MP	-4000	62	62	63	62	60	63	61	60
	-2000	49	48	50	47	45	47	41	35
	+2000	56	54	48	46	45	43	38	31
	+4000	70	67	64	66	60	61	59	56
DS-LP	-4000	62	61	60	63	62	63	57	55
	-2000	48	46	47	46	44	45	38	30
	+2000	55	52	47	44	43	40	36	29
	+4000	69	66	62	63	60	60	56	51

### SELF-GENERATED SOUND POWER RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.75	1.5	2	2.5	3.1	4.0	6.0	12	20
PWL ADJUSTMENT FACTOR, dB	-6	-3	-2	-1	0	+1	+3	+6	+8

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**SONO-CON  
CIRCULAR  
SILENCERS  
Model SDS**



**MODEL SDS**

CIRCULAR

**NOMENCLATURE EXAMPLE:**

DIAMETER	LENGTH	MODEL
24 Ø	48	SDS-HP

*The SDS series, with its larger body diameter, provides increased attenuation at the lower and mid-frequencies with a modest static pressure drop.*

MODEL NO.	OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY FPM	DYNAMIC INSERTION LOSS IN DECIBELS							
SDS-HP	-4000	10	17	30	40	41	35	22	13
	-2000	9	15	28	39	38	36	23	16
	0	8	11	19	33	35	37	24	18
	+2000	7	12	25	32	36	35	25	19
	+4000	6	11	21	31	33	37	24	21
SDS-MP	-4000	7	15	25	35	38	29	18	12
	-2000	6	14	24	34	35	30	19	15
	0	5	10	18	30	33	30	20	18
	+2000	5	11	23	28	31	29	21	18
	+4000	4	10	18	27	30	28	21	17
SDS-LP	-4000	6	12	22	33	33	22	18	12
	-2000	5	11	20	30	32	23	19	12
	0	4	9	16	28	31	24	20	16
	+2000	4	10	18	26	30	23	20	16
	+4000	3	9	17	24	29	25	21	15

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# SonoCon Circular Silencers

# Model SDS

## ENGINEERING DATA

### STATIC PRESSURE LOSS IN INCHES H<sub>2</sub>O

MODEL	SDS-HP	0.15	0.26	0.40	0.58	0.78	1.01	1.27	1.54	1.86
	SDS-MP	0.07	0.12	0.18	0.27	0.36	0.46	0.57	0.70	0.85
	SDS-LP	0.06	0.10	0.16	0.23	0.31	0.40	0.50	0.61	0.74
	VELOCITY	1780	2350	2920	3490	4060	4635	5210	5775	6345
SIZE D x L	FACE AREA	AIR FLOW IN CFM								
12 x 36	0.79	1406	1857	2307	2757	3207	3662	4116	4562	5013
14 x 36	1.07	1905	2515	3124	3734	4344	4959	5575	6179	6789
16 x 36	1.40	2492	3290	4088	4886	5684	6489	7294	8085	8883
18 x 36	1.77	3151	4160	5168	6177	7186	8204	9222	10222	11231
20 x 40	2.18	3880	5123	6366	7608	8851	10104	11358	12590	13832
22 x 44	2.64	4699	6204	7709	9214	10718	12236	13754	15246	16751
24 x 48	3.14	5589	7379	9169	10959	12748	14554	16359	18134	19923
26 x 52	3.69	6568	8672	10775	12878	14981	17103	19225	21310	23413
28 x 56	4.28	7618	10058	12498	14937	17377	19838	22299	24717	27157
30 x 60	4.91	8740	11539	14337	17136	19935	22758	25581	28355	31154
32 x 64	5.58	9932	13113	16294	19474	22655	25863	29072	32225	35405
36 x 72	7.07	12585	16615	20644	24674	28704	32769	36835	40829	44859
40 x 80	8.73	15539	20516	25492	30468	35444	40464	45483	50416	55392
44 x 88	10.56	18797	24816	30835	36854	42874	48946	55018	60984	67003
48 x 96	12.57	22375	29540	36704	43869	51034	58262	65490	72592	79757
52 x 104	14.75	26255	34663	43070	51478	59885	68366	76848	85181	93589
56 x 112	17.10	30438	40185	49932	59679	69426	79259	89091	98753	108500
60 x 120	19.63	34941	46131	57320	68509	79698	90985	102272	113363	124552

AIR FLOW RATINGS SHOWN INCLUDE STATIC REGAIN. THEREFORE IF SILENCERS ARE INSTALLED IMMEDIATELY BEFORE OR AFTER ELBOWS, TRANSITIONS, AT THE INTAKE OR DISCHARGE OF THE SYSTEM, OR WITHOUT DUCT, ALLOWANCE TO COMPENSATE FOR SUCH CONDITIONS MUST BE INCLUDED WHEN CALCULATING THE OPERATING PRESSURE LOSS THRU THE SILENCER. FAILURE TO MAKE ALLOWANCE FOR THESE CONDITIONS CAN ADD SEVERAL VELOCITY HEADS TO THE PRESSURE LOSS OF THE SYSTEM.


### SELF-GENERATED SOUND POWER RATINGS (PWL) dB re 10<sup>-12</sup> WATTS

MODEL	OCTAVE BAND	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hz	63	125	250	500	1000	2000	4000	8000
	FACE VELOCITY								
SDS-HP	-4000	62	63	64	63	62	64	64	62
	-2000	51	49	50	48	47	48	46	40
	+2000	57	55	49	48	47	47	41	33
	+4000	72	68	66	67	61	63	63	60
SDS-MP	-4000	62	62	63	62	60	63	61	60
	-2000	49	48	50	47	45	47	41	35
	+2000	56	54	48	46	45	43	38	31
	+4000	70	67	64	66	60	61	59	56
SDS-LP	-4000	62	61	60	63	62	63	57	55
	-2000	48	46	47	46	44	45	38	30
	+2000	55	52	47	44	43	40	36	29
	+4000	69	66	62	63	60	60	56	51

### SELF-GENERATED SOUND POWER RATINGS/FACE AREA ADJUSTMENT FACTORS

FACE AREA	.75	1.5	2	2.5	3.1	4.0	6.0	12	20
PWL ADJUSTMENT FACTOR, dB	-6	-3	-2	-1	0	+1	+3	+6	+8

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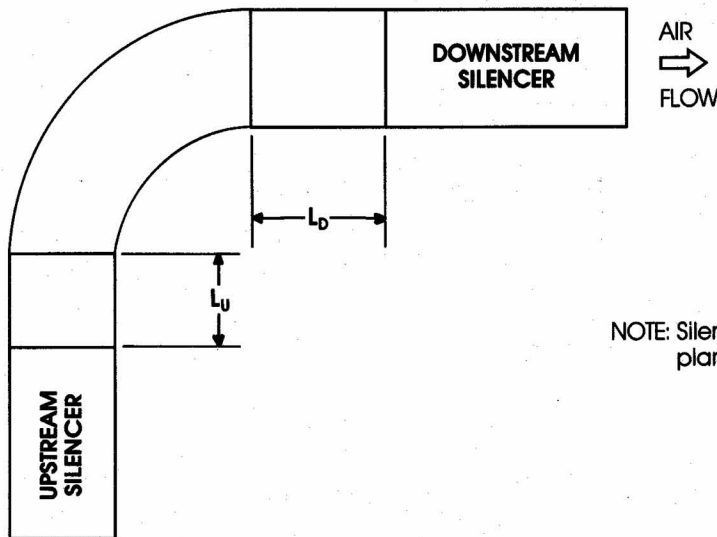
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**PRESSURE DROP AT DUCT ELBOWS**  
**INSTALLATION GUIDELINES**

**ELBOWS**



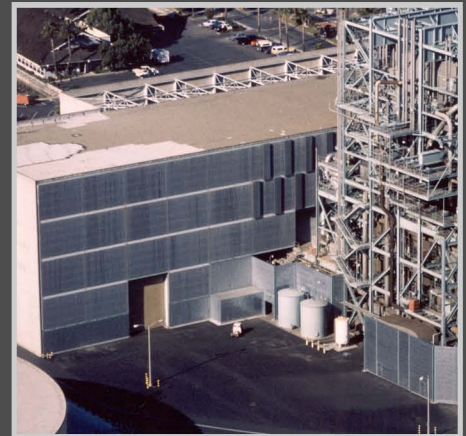
NOTE: Silencer baffles should be parallel to the plane of the elbow.

	<b><math>L_u</math> &amp; <math>L_d</math></b>	<b><math>\Delta P</math> FACTOR</b>
Radius Elbows and Square Elbows with Turning Vanes	$D_{eq} \times 3$	1.0
	$D_{eq} \times 2$	1.25
	$D_{eq} \times 1$	1.75
	$D_{eq} \times 0.5$	3.0
	Directly Connected	Not Advised
Square Elbows Without Turning Valves	$D_{eq} \times 3$	1.0
	$D_{eq} \times 2$	1.5
	$D_{eq} \times 1$	2.0

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# SonoCon Noise Control

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