



## Low Frequency Attenuator - Model **LLP**

Dynamic Insertion Loss (dB) Octave Band/Center Frequency (Hz)											
Model	Flow	Velocity fpm	Press Drop	1 63	2 125	3 250	4 500	5 1K	6 2K	7 4K	8 8K
LLP-36	Reverse Flow	-2000	0.32	4	7	13	18	16	12	12	10
		-1500	0.18	4	7	12	17	15	12	12	9
		-1000	0.08	4	7	12	17	15	12	12	9
	Forward Flow	0		3	6	12	16	15	11	11	9
		1000	0.08	3	5	11	15	15	10	10	8
		1500	0.18	3	5	11	15	15	10	10	8
		2000	0.32	3	5	11	14	14	9	9	7
LLP-60	Reverse Flow	-2000	0.36	7	12	18	25	24	18	13	12
		-1500	0.20	7	12	18	25	24	18	13	12
		-1000	0.09	6	11	18	24	23	17	12	11
	Forward Flow	0		6	10	17	23	22	17	12	10
		1000	0.09	6	10	17	22	20	16	11	10
		1500	0.20	6	10	17	22	20	16	11	10
		2000	0.36	6	9	16	21	20	15	10	10
LLP-84	Reverse Flow	-2000	0.40	10	14	24	32	30	24	16	12
		-1500	0.23	10	14	24	32	30	24	16	12
		-1000	0.10	9	13	23	32	29	24	15	12
	Forward Flow	0		9	13	22	32	29	24	15	11
		1000	0.10	9	12	20	30	27	22	14	10
		1500	0.23	9	12	20	30	27	21	14	10
		2000	0.36	8	12	20	29	27	20	13	10
LLP-120	Reverse Flow	-2000	0.44	11	19	31	43	40	27	20	15
		-1500	0.25	11	19	31	43	40	27	20	15
		-1000	0.11	11	18	31	43	40	27	19	15
	Forward Flow	0		11	17	30	42	39	26	19	15
		1000	0.11	10	17	30	41	39	26	18	14
		1500	0.25	10	17	30	41	39	26	18	14
		2000	0.44	9	16	29	40	39	26	18	14

Forward Flow - characteristic of supply or discharge fan systems.  
Reverse Flow - typical of return or intake fan systems.

### Pressure Drop Calculation for Specific Velocity

Actual Velocity (fpm) = CFM x 144 , [Height (in.) x Width (in.)]

$$\text{Pressure Drop} = \left( \frac{\text{Actual Velocity}}{2000} \right)^2 \times \text{Catalog Pressure Drop @ 2000 fpm}$$

#### Standard Construction

22 gauge galvanized casings  
24 gauge perforated baffles  
Acoustic quality Fiberglass media

#### Optional Features

Mylar or polyethylene liners  
Fiberglass cloth liners  
Stainless steel or aluminum construction

Computer program available which provides attenuator performance at actual job conditions.



# Rectangular Attenuators

## Self-noise Power Levels

		Self-Noise Power Levels, dB re 10 <sup>-12</sup> Watts Octave Band/Center Frequency (Hz)							
Model	Velocity fpm	1 63	2 125	3 250	4 500	5 1K	6 2K	7 4K	8 8K
HP	1000	53	44	38	37	41	44	38	31
	1500	58	53	47	46	47	54	53	48
	2000	71	62	55	54	52	59	63	59
MP	1000	55	48	37	35	37	35	27	27
	2000	61	57	52	49	48	55	55	50
	2500	70	63	58	55	53	59	62	58
LP	1000	53	42	37	35	35	29	22	27
	2000	60	56	52	49	48	55	51	44
	2500	67	62	57	55	52	59	59	53
LHP	1000	56	41	41	47	46	41	30	30
	1500	56	47	45	48	53	59	56	48
	2000	63	55	49	51	54	63	67	60
LMP	1000	47	39	37	37	39	39	24	22
	1500	50	43	47	48	45	46	36	30
	2000	52	49	59	55	52	54	49	40
LLP	1000	44	36	33	34	35	35	21	19
	1500	45	40	39	38	40	43	29	28
	2000	46	43	47	46	47	52	44	38

Area Correction Factors - Listed self-noise power levels are for silencers with a face area of four (4) square feet. For silencers with different face areas, the following values must be added to those in the table.

Face area (sq. ft.)	0.5	1	2	4	6	8	16	32	64	128
PWL Correction Factors, dB	-9	-6	-3	0	2	3	6	9	12	15