

## Packless Attenuators

Packless attenuators contain no absorptive fill or media of any kind. Units are available in three models for traditional applications requiring broad band noise reduction. Performance data is provided for three basic lengths - 36", 72", and 108". Contact AeroSonics for other silencer lengths.

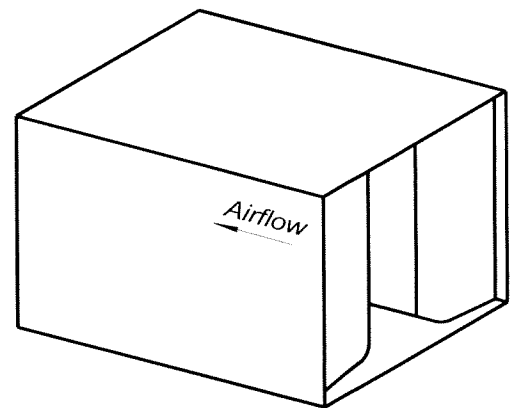
Model PHP is a standard pressure drop unit ideally suited for low velocity systems.

Model PMP also provides excellent attenuation values along with a moderate pressure drop at somewhat higher air velocities.

Model PLP offers the lowest pressure drop for higher velocity systems.

Special features of our Standard Attenuators are:

- No acoustic fill, scrim cloth, or other media
- Bellmouth entrance to help minimize turbulence
- Tuned perforated resonant chambers to achieve broad-band attenuation
- 22 gauge galvanized steel casings
- 24 gauge perforated galvanized baffles
- Seams are mastic filled to insure airtight units to 8" w.g.



Components are also available in stainless steel.

Acoustical performance ratings are based on tests conducted by Intertek Testing Services, formerly ETL Testing Laboratories, Inc., Cortland, New York, in accordance with ASTM E477 "Standard Method of Testing Duct Liner Materials and Prefabricated Silencers for Acoustical and Airflow Performance." Copies of the test reports are available upon request.

---



## Packless Attenuator - Model **PHP**

		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
PHP-36	Reverse	-1000	0.44	8	11	16	23	13	11	8	8
	Flow	-500	0.11	8	11	16	23	13	11	8	8
		0		8	8	14	18	11	11	9	9
	Forward	500	0.11	7	8	17	22	13	11	9	9
	Flow	1000	0.44	7	8	17	22	13	11	9	9
PHP-72	Reverse	-1000	0.53	12	16	24	29	18	14	12	10
	Flow	-500	0.13	12	16	24	29	18	14	12	10
		0	0	8	10	17	24	16	13	12	10
	Forward	500	0.13	11	14	22	29	19	14	13	12
	Flow	1000	0.53	11	14	22	29	19	14	13	12
PHP-108	Reverse	-1000	0.64	16	24	29	35	24	18	15	11
	Flow	-500	0.16	16	24	29	35	24	18	15	11
		0		10	15	23	28	20	17	15	14
	Forward	500	0.16	13	20	30	33	24	18	15	14
	Flow	1000	0.64	13	20	30	33	24	18	15	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

$$\text{Pressure Drop} = \left( \frac{\text{Actual Velocity}}{1000} \right)^2 \times \text{Catalog Pressure Drop @ 1000 fpm}$$

#### **Standard Construction**

22 gauge galvanized casings  
24 gauge perforated baffles  
No acoustic fill or absorptive material

#### **Optional Features**

Stainless Steel Construction

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



## Packless Attenuator - Model **PLP**

		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
PLP-36	Reverse	-2000	0.61	7	8	15	13	9	8	7	6
	Flow	-1000	0.15	6	6	14	12	8	7	7	6
		0		5	4	10	9	8	7	6	5
	Forward	1000	0.15	6	5	13	10	8	7	6	6
	Flow	2000	0.61	6	6	15	12	9	8	7	6
PLP-72	Reverse	-2000	0.72	9	10	20	16	11	9	8	8
	Flow	-1000	0.18	7	8	17	14	10	9	8	8
		0		6	6	16	14	10	9	8	8
	Forward	1000	0.18	6	7	19	15	11	10	9	8
	Flow	2000	0.72	7	8	21	17	12	11	9	8
PLP-108	Reverse	-2000	0.84	13	15	27	18	14	11	10	8
	Flow	-1000	0.21	11	12	22	17	13	11	10	8
		0		9	10	19	16	12	11	10	8
	Forward	1000	0.21	10	10	24	18	14	12	10	8
	Flow	2000	0.84	11	12	28	20	15	12	10	8

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

### Pressure Drop Calculation for Specific Velocity

$$\text{Pressure Drop} = \left( \frac{\text{Actual Velocity}}{1000} \right)^2 \times \text{Catalog Pressure Drop @ 1000 fpm}$$

#### **Standard Construction**

22 gauge galvanized casings  
gauge perforated baffles  
No acoustic fill or absorptive material

#### **Optional Features**

Stainless Steel Construction

24

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



## Packless Attenuator - Model **PMP**

		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
<b>PMP-36</b>	Reverse	-1000	0.36	5	6	9	16	21	14	9	9
	Flow	-500	0.09	5	6	9	16	21	14	9	9
		0		4	4	6	15	18	11	10	9
	Forward	500	0.09	5	5	9	16	20	13	10	8
	Flow	1000	0.36	5	5	9	16	20	13	10	8
<b>PMP-72</b>	Reverse	-1000	0.51	9	12	17	28	27	16	11	10
	Flow	-500	.13	9	12	17	28	27	16	11	10
		0		5	7	11	24	23	16	12	11
	Forward	500	0.13	6	8	15	25	25	16	12	12
	Flow	1000	0.51	6	8	15	25	25	16	12	12
<b>PMP-108</b>	Reverse	-1000	0.63	10	18	25	35	35	20	17	15
	Flow	-500	.16	10	18	25	35	35	20	17	15
		0		8	12	15	30	30	20	17	16
	Forward	500	0.16	8	15	21	33	32	21	18	17
	Flow	1000	0.63	8	15	21	33	32	21	18	17

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

### Pressure Drop Calculation for Specific Velocity

$$\text{Pressure Drop} = \left( \frac{\text{Actual Velocity}}{1000} \right)^2 \times \text{Catalog Pressure Drop @ 1000 fpm}$$

#### **Standard Construction**

22 gauge galvanized casings  
gauge perforated baffles  
No acoustic fill or absorptive material

#### **Optional Features**

Stainless Steel Construction

24

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