# Hospital/Clean Room Attenuators

Hospital/Clean Room attenuators are available in three models, specifically engineered for sensitive area applications requiring broad band noise reduction coupled with erosion proof acoustic fill. Performance data is provided for four basic lengths - 36", 60", 84", and 120". Units are also offered in 48", 72", and 96" lengths.

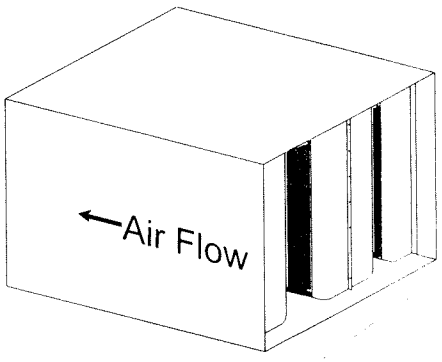
Model SPC is a standard pressure drop unit ideally suited for system velocities at or near 1,000 fpm.

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

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

Special features of our Hospital/Clean Room Attenuators are:

- Diffusion angle to improve pressure drop
- Bellmouth entrance to help minimize turbulence
- 22 gauge galvanized steel casings
- 24 gauge perforated galvanized baffles
- Acoustic fill encapsulated in polyethylene to eliminate erosion and absorption of gases
- Acoustic stand-off between the perforated baffle and the acoustic fill to enhance performance
- Seams are mastic filled to insure airtight units to 8" w.g.




ASTM E-84 ratings for the assembled unit:

- Flamespread 0
- Smoke Developed 15

Components are also available in stainless steel or aluminum construction.

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.

AEROSONICS
SOUND CONTROL PRODUCTS

# Hospital/Clean Room Attenuator - Model LPC

| | | | | 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 |
| LPC-36 | Reverse Flow | -2000 | 0.20 | 5 | 6 | 8 | 10 | 17 | 18 | 11 | 7 |
| | | -1500 | 0.11 | 5 | 6 | 7 | 10 | 17 | 18 | 11 | 6 |
| | | -1000 | 0.05 | 5 | 6 | 7 | 10 | 17 | 19 | 11 | 6 |
| | | 0 | | 4 | 5 | 6 | 9 | 17 | 19 | 12 | 7 |
| | Forward Flow | 1000 | 0.05 | 5 | 6 | 6 | 8 | 17 | 20 | 13 | 8 |
| | | 1500 | 0.11 | 4 | 5 | 6 | 8 | 16 | 20 | 14 | 8 |
| | | 2000 | 0.20 | 4 | 5 | 6 | 7 | 15 | 20 | 14 | 8 |
| LPC-60 | Reverse Flow | -2000 | 0.23 | 7 | 9 | 13 | 19 | 28 | 28 | 16 | 8 |
| | | -1500 | 0.13 | 6 | 8 | 13 | 19 | 29 | 29 | 16 | 7 |
| | | -1000 | 0.06 | 6 | 8 | 13 | 18 | 30 | 30 | 17 | 7 |
| | | 0 | | 5 | 7 | 11 | 17 | 32 | 31 | 18 | 9 |
| | Forward Flow | 1000 | 0.06 | 6 | 7 | 10 | 15 | 32 | 32 | 19 | 10 |
| | | 1500 | 0.13 | 6 | 6 | 10 | 14 | 31 | 32 | 20 | 10 |
| | | 2000 | 0.23 | 5 | 6 | 9 | 13 | 29 | 32 | 20 | 10 |
| LPC-84 | Reverse Flow | -2000 | 0.26 | 8 | 11 | 15 | 24 | 30 | 39 | 20 | 10 |
| | | -1500 | 0.15 | 8 | 10 | 15 | 24 | 32 | 40 | 21 | 10 |
| | | -1000 | 0.07 | 7 | 10 | 14 | 23 | 34 | 41 | 22 | 10 |
| | | 0 | | 7 | 9 | 13 | 21 | 38 | 42 | 24 | 12 |
| | Forward Flow | 1000 | 0.07 | 7 | 8 | 12 | 18 | 38 | 43 | 25 | 14 |
| | | 1500 | 0.15 | 7 | 7 | 11 | 17 | 36 | 43 | 26 | 14 |
| | | 2000 | 0.26 | 6 | 7 | 10 | 16 | 34 | 43 | 26 | 15 |
| LPC-120 | Reverse Flow | -2000 | 0.30 | 9 | 14 | 17 | 28 | 43 | 49 | 34 | 13 |
| | | -1500 | 0.17 | 9 | 14 | 16 | 27 | 42 | 49 | 33 | 13 |
| | | -1000 | 0.08 | 8 | 13 | 16 | 26 | 42 | 48 | 32 | 13 |
| | | 0 | | 7 | 12 | 16 | 25 | 40 | 48 | 31 | 14 |
| | Forward Flow | 1000 | 0.08 | 7 | 11 | 16 | 24 | 39 | 48 | 30 | 15 |
| | | 1500 | 0.17 | 7 | 10 | 16 | 23 | 38 | 48 | 30 | 15 |
| | | 2000 | 0.30 | 7 | 9 | 15 | 22 | 38 | 48 | 31 | 15 |

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 Fill encapsulated in polyethylene to eliminate erosion and absorption of gases

**Optional Features**

Stainless steel or aluminum construction

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

AEROSONICS
SOUND CONTROL PRODUCTS

# Hospital/Clean Room Attenuator - Model MPC

| | | | | 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 |
| MPC-36 | Reverse Flow | -2000 | 0.40 | 8 | 10 | 14 | 20 | 27 | 29 | 22 | 8 |
| | | -1500 | 0.23 | 7 | 9 | 12 | 18 | 26 | 27 | 21 | 8 |
| | | -1000 | 0.10 | 6 | 8 | 11 | 17 | 25 | 26 | 21 | 8 |
| | | 0 | | 6 | 7 | 10 | 16 | 25 | 26 | 20 | 8 |
| | Forward Flow | 1000 | 0.10 | 6 | 7 | 10 | 15 | 24 | 26 | 19 | 9 |
| | | 1500 | 0.23 | 5 | 7 | 10 | 15 | 24 | 25 | 19 | 9 |
| | | 2000 | 0.40 | 5 | 6 | 9 | 14 | 22 | 25 | 19 | 9 |
| MPC-60 | Reverse Flow | -2000 | 0.52 | 10 | 13 | 17 | 28 | 39 | 42 | 26 | 11 |
| | | -1500 | 0.29 | 10 | 12 | 16 | 26 | 39 | 42 | 26 | 10 |
| | | -1000 | 0.13 | 9 | 11 | 16 | 24 | 38 | 42 | 25 | 10 |
| | | 0 | | 8 | 10 | 15 | 23 | 38 | 41 | 25 | 10 |
| | Forward Flow | 1000 | 0.13 | 8 | 9 | 14 | 21 | 38 | 41 | 25 | 11 |
| | | 1500 | 0.29 | 7 | 8 | 12 | 21 | 37 | 40 | 25 | 11 |
| | | 2000 | 0.52 | 7 | 8 | 12 | 20 | 36 | 39 | 24 | 12 |
| MPC-84 | Reverse Flow | -2000 | 0.60 | 12 | 14 | 22 | 34 | 43 | 49 | 33 | 14 |
| | | -1500 | 0.34 | 11 | 13 | 20 | 32 | 42 | 49 | 33 | 12 |
| | | -1000 | 0.15 | 11 | 13 | 19 | 31 | 41 | 48 | 32 | 12 |
| | | 0 | | 10 | 12 | 18 | 29 | 40 | 48 | 31 | 12 |
| | Forward Flow | 1000 | 0.15 | 10 | 11 | 18 | 28 | 39 | 47 | 30 | 14 |
| | | 1500 | 0.34 | 10 | 11 | 17 | 28 | 39 | 45 | 28 | 15 |
| | | 2000 | 0.60 | 9 | 10 | 17 | 27 | 37 | 45 | 28 | 16 |
| MPC-120 | Reverse Flow | -2000 | 0.84 | 14 | 16 | 25 | 39 | 51 | 59 | 42 | 15 |
| | | -1500 | 0.47 | 13 | 16 | 24 | 37 | 50 | 58 | 41 | 14 |
| | | -1000 | 0.21 | 13 | 16 | 22 | 36 | 48 | 56 | 40 | 14 |
| | | 0 | | 12 | 15 | 21 | 36 | 45 | 53 | 38 | 15 |
| | Forward Flow | 1000 | 0.21 | 12 | 14 | 20 | 34 | 44 | 51 | 37 | 16 |
| | | 1500 | 0.47 | 11 | 14 | 20 | 32 | 43 | 50 | 37 | 17 |
| | | 2000 | 0.84 | 11 | 13 | 20 | 32 | 43 | 50 | 35 | 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**

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 Fill encapsulated in polyethylene to eliminate erosion and absorption of gases

**Optional Features**

Stainless steel or aluminum construction

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

AEROSONICS
SOUND CONTROL PRODUCTS

# Hospital/Clean Room Attenuator - Model SPC

| | | | | 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 |
| SPC-36 | Reverse Flow | -1500 | 0.52 | 8 | 12 | 17 | 25 | 34 | 35 | 31 | 10 |
| | | -1000 | 0.23 | 7 | 10 | 16 | 24 | 33 | 34 | 30 | 10 |
| | | -500 | 0.06 | 7 | 10 | 15 | 24 | 33 | 34 | 30 | 10 |
| | | 0 | | 7 | 9 | 15 | 23 | 33 | 34 | 30 | 10 |
| | Forward Flow | 500 | 0.06 | 7 | 9 | 14 | 21 | 32 | 34 | 29 | 10 |
| | | 1000 | 0.23 | 6 | 8 | 14 | 21 | 32 | 34 | 29 | 10 |
| | | 1500 | 0.52 | 6 | 8 | 13 | 20 | 32 | 33 | 29 | 10 |
| SPC-60 | Reverse Flow | -1500 | 0.74 | 13 | 14 | 21 | 33 | 48 | 54 | 35 | 12 |
| | | -1000 | 0.32 | 11 | 12 | 21 | 31 | 47 | 53 | 35 | 11 |
| | | -500 | 0.08 | 10 | 12 | 20 | 30 | 47 | 53 | 35 | 11 |
| | | 0 | | 10 | 12 | 20 | 30 | 46 | 52 | 34 | 11 |
| | Forward Flow | 500 | 0.08 | 9 | 11 | 19 | 29 | 46 | 51 | 34 | 12 |
| | | 1000 | 0.32 | 9 | 11 | 19 | 28 | 46 | 51 | 34 | 12 |
| | | 1500 | 0.74 | 8 | 10 | 17 | 28 | 46 | 50 | 34 | 13 |
| SPC-84 | Reverse Flow | -1500 | 0.95 | 14 | 16 | 25 | 42 | 52 | 58 | 46 | 14 |
| | | -1000 | 0.42 | 14 | 15 | 24 | 40 | 51 | 56 | 46 | 14 |
| | | -500 | 0.11 | 13 | 14 | 23 | 40 | 50 | 56 | 45 | 14 |
| | | 0 | | 12 | 14 | 22 | 39 | 50 | 55 | 44 | 15 |
| | Forward Flow | 500 | 0.11 | 12 | 13 | 22 | 38 | 50 | 55 | 44 | 16 |
| | | 1000 | 0.42 | 12 | 13 | 22 | 38 | 49 | 54 | 43 | 17 |
| | | 1500 | 0.95 | 11 | 12 | 20 | 36 | 49 | 52 | 41 | 17 |
| SPC-120 | Reverse Flow | -1500 | 1.33 | 17 | 18 | 32 | 47 | 61 | 64 | 48 | 16 |
| | | -1000 | 0.59 | 17 | 18 | 30 | 46 | 59 | 62 | 47 | 16 |
| | | -500 | 0.15 | 16 | 18 | 29 | 46 | 57 | 60 | 45 | 17 |
| | | 0 | | 15 | 17 | 28 | 46 | 55 | 58 | 45 | 17 |
| | Forward Flow | 500 | 0.15 | 14 | 16 | 27 | 45 | 54 | 57 | 44 | 17 |
| | | 1000 | 0.59 | 14 | 16 | 27 | 44 | 53 | 56 | 43 | 18 |
| | | 1500 | 1.33 | 13 | 16 | 26 | 42 | 53 | 55 | 43 | 18 |

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.)]

$$\text{Pressure Drop} = \left(\frac{\text{Actual Velocity}}{1500}\right)^2 \times \text{Catalog Pressure Drop @ 1500 fpm}$$

**Standard Construction**

22 gauge galvanized casings
24 gauge perforated baffles
Acoustic Fill encapsulated in polyethylene to eliminate erosion and absorption of gases

**Optional Features**

Stainless steel or aluminum construction

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