

PROJECT SOLUTIONS

Project: Camden Amphitheater
Application: Rooftop Units

T-elbow silencers achieve high acoustic insertion loss for world class convertible amphitheater.

PROBLEM: Compounded problems

The rooftop air handling units had open return air inlets to the ceiling plenums. High silencer acoustic insertion loss was specified to reach the required low noise criteria. To minimize generated noise a low pressure drop was also required.

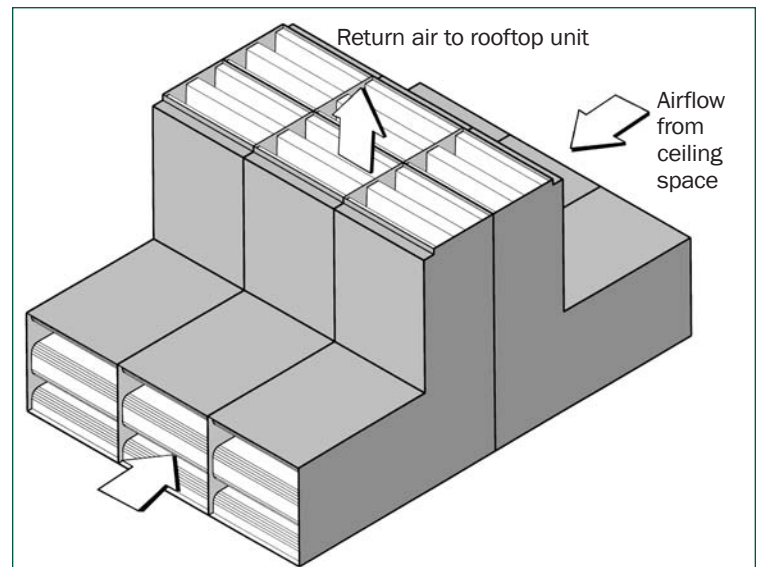
SOLUTION: T-elbow silencers, ex-type

T-elbow silencers were supplied having an acoustic insertion loss of 32 dB at 125 Hz and a pressure drop of 0.21" w.g. Each "T" silencer was made up of 6 elbow silencers installed back to back. To achieve the pressure drop, elbow silencers were "ex-type" having a larger body size than the unit connection size.

NOTE OF INTEREST: This unique theater is a prototype for future multi-purpose entertainment facilities and is the first indoor/outdoor facility of its kind in the U.S. Flexible design challenges were accentuated by uses ranging from 25,000 seat outdoor pop music events to 1,600 seat indoor classical concerts.



Vibro-Acoustics supplied rectangular and T-elbow silencers for this indoor/outdoor facility in Camden, New Jersey.



Vibro-Acoustics' T-elbow silencers were sized to fit the rooftop units' connections and the ceiling plenum space. The connection size was 47" x 108" and the outside body size 56" x 108". The bottom area was 158" x 108" necessitating modular elbow silencer assembly.