

### PROJECT SOLUTIONS

**Project:** Litton Systems Clean Room  
**Application:** Duct Silencers (Centrifugal Fan Systems)

Multiple fan silencing systems, having no glass fiber, reduce noise in high tech clean room.

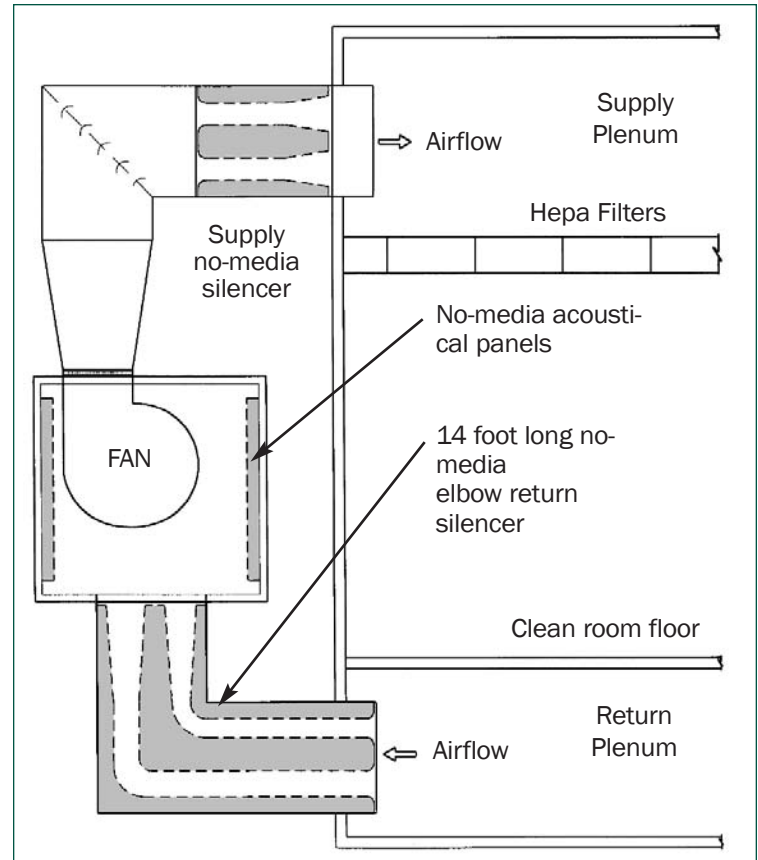
**PROBLEMS:** Unreliable ratings  
 Insufficient duct length  
 Insufficient straight duct  
 No glass fiber

On the return air side, only a 14 foot long large elbow connected the fan to the space. This was not sufficient space to achieve the optimum noise reduction required. Therefore, accurate silencer performance rating was extremely critical for both the specification and the final result.

**SOLUTIONS:** No-media elbow silencer  
 Witness lab test  
 No-media panels  
 Package supply

A 14 foot long no-media prototype elbow silencer was designed to achieve maximum acoustic insertion loss in the space allowed. It was witness tested by the engineer in the Vibro-Acoustics' aero-acoustic laboratory and the performance was included in the specification as the basis of design.

No-media acoustical panels were supplied for installation in the return air plenum for an extra boost in performance. Standard no-media straight silencers were installed in the supply duct, which completed the Vibro-Acoustic package.



*Schematic elevation of clean room silencing system which uses no glass fiber. (one of multiple systems.)*