

PROJECT SOLUTIONS

Air supply stacks are an aesthetic component of the architectural design of a university computer facility.

PROBLEM: Aesthetics

Fans were located in the penthouse atop a glass atrium. Connecting ducts were not allowed to pass through the atrium. However they were to be a very visible part of the architecture.

SOLUTION: Special stacks

14 vertical air stacks, 7 on each side of the building, were designed and supplied by Vibro-Acoustics to be external to the atrium, structurally self supporting and follow the contour of the atrium glass. Each stack was fabricated from 3/16 inch steel plate and has thermal and vapor barriers. Both skins were stringently tested to ensure there was no leakage. Each entire assembly was supplied in one piece.

PROBLEM: Energy consumption

Since the building was to be in use continuously, silencing was to require minimum pressure drop and energy consumption.

SOLUTION: CLP silencing systems

Silencing consists of an acoustic glass fiber liner running the full length of each stack and protected by a perforated metal liner. There were no center pads or splitters to add pressure drop.

PROBLEM: Aesthetics

All the ductwork inside the building is exposed.

SOLUTION: Silencer returns

Large circular silencers are floor mounted and have protective inlet screens (see lower right figure).



Special air supply stack systems match the atrium contour.



Floor mounted return silencers.