

ASU BioDesign Institute - Building A

Tempe, Arizona

CASE STUDY | college / university



Client - Arizona State University
Rep Office - Norman Wright Mechanical
Lead Architect - Gould Evans
Associate Architect - Lord Aeck & Sargent
Engineer - Newcomb & Boyd
Construction - Sundt Construction
LEED Certification - LEED Gold Certified

Project Highlights:

- » 176,000 square-foot facility
- » Bio-Safety Level 3 Lab (BSL-3 lab)
- » State-of-the-art research lab
- » Green Building design applied throughout the building
- » 2005 AIA Merit Award
- » 2006 Laboratory of the Year by R&D Magazine



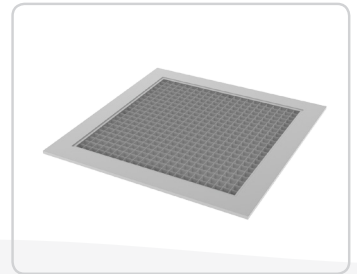
ABOUT THE PROJECT

Considered by most as the "lab of the future," The ASU BioDesign Institute is a massive multi-building learning and research center built to meet the demands of an ever-changing world. Buildings A & B encompass 350,000 square-feet of award-winning, state-of-the-art LEED-certified space. The Biodesign Institute represents the State of Arizona's largest investment in bioscience-related research. Arizona State University is the first university in the U.S. to create an interdisciplinary research institute solely devoted to bio-inspired innovation principles. The three major areas in which The Biodesign Institute is working to make a difference are: biomedicine & health outcomes, sustainability and security. This framework allows the Institute to address these critical global challenges by creating "use-inspired," as well as "bio-inspired" solutions.

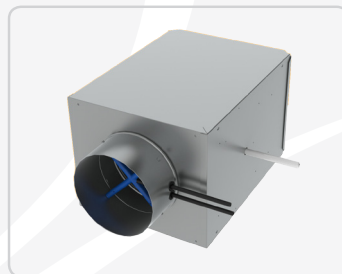
Building A achieved a LEED NC 2.2 Gold Certification after it was built. Designed with Green Building concepts in mind, Building A is filled with sustainable elements. Some of the green elements featured are the use of public transportation. The university encourages all to take advantage of alternate transportation by offering free passes for public service, has several bike racks spread throughout campus and many showers in all the buildings. It also makes excellent use of the abundance of natural light provided. Building A has an impressive atrium that spans the entire space. Instead of having several walls to divide offices and labs, the facility utilizes glass so that



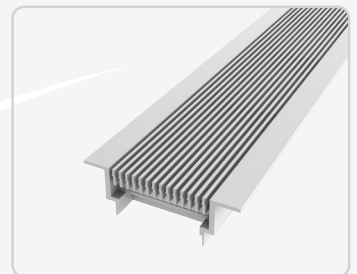
TLFAA



50F



DESV



CT



light easily penetrate the building. This also offers impressive views of the surrounding landscape while saving energy. Other Green Building elements are the state-of-the-art storm drain system and the use of a reflective roof membrane to reduce the effect of the heat island.

THE TITUS SOLUTION

The BioDesign Institute has several air distribution products from Titus ranging from grilles and diffusers to terminal units. Our laminar flow diffusers, models TLF-AA and TLF-SS, are the industry standard for unidirectional flow. TLF diffusers can be used to create clean zones by positioning the diffuser directly over the area to be washed with clean air. They are also used in most operating rooms as the center diffuser. The vertical piston of air created by the TLF is used to discharge clean air over the patient during operations. The Titus CT linear bar diffusers are designed for both heating and cooling applications, supply as well as return. They are available in eight different core styles plus a wide selection of frames and borders. These diffusers can be used for ceiling, side wall, or sill installations. Accessories such as directional blades, dampers, blank-offs, access doors and mitered corners make these diffusers even more versatile.

Single Duct terminals are the fundamental building blocks for Variable Air Volume (VAV) systems. Their primary function is to regulate airflow to a zone, in response to zone temperature requirements. The Titus DESV is unique as it incorporates many design features that increase performance, decrease service and installation costs, and offer increased value, over and above this basic function. This unit also contains a standard AeroCross™ multi-point center averaging velocity sensor. The 50F is an Eggcrate grille. It has the highest free area of any return grille. These grilles are available with an aluminum border and aluminum grid; steel border and aluminum grid; or entirely stainless steel construction. It is offered in 1/2 x 1/2 x 1/2-inch, 1/2 x 1/2 x 1-inch, or 1 x 1 x 1-inch core sizes. The 50F is also available as a filtered return grille.

THE END RESULT

Winner of the 2006 Lab of the Year by R & D Magazine, the ASU BioDesign Institute is now the benchmark for new research facilities being constructed. The Green Building elements featured throughout all the buildings not only help to save energy, but fosters a unique learning environment for the next generation of researchers and scientists to grow and develop.





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