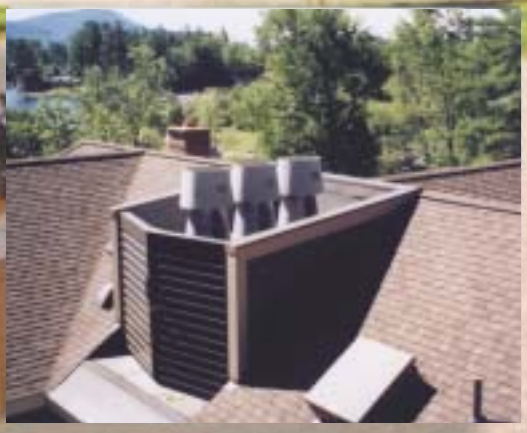
Strobic Air Tri-Stack™ Systems Keep a LOW PROFILE at thousands of facilities

Tri-Stack systems work quietly to eliminate air pollution, control odor and comply with environmental standards



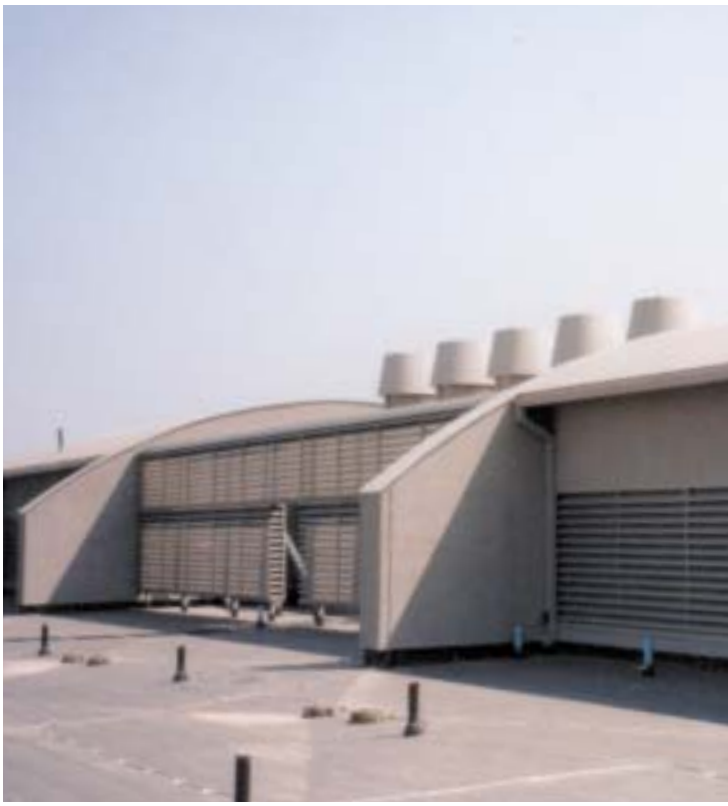
Strobic Air Corporation

A subsidiary of MET PRO CORPORATION

Strobic Air Tri-Stack systems

First we invented the technology... then we perfected it.

The photos on these pages show representative examples of Tri-Stack systems in use on a variety of buildings throughout the country. Tri-Stack laboratory workstation fume hood exhaust and roof exhaust systems are successfully operating at hundreds of research laboratories at universities and hospitals as well as at many pharmaceutical, chemical and petrochemical manufacturing facilities. Tri-Stack systems are also being utilized at wastewater treatment plants, isolation rooms, clean rooms and in many other installations where quiet operation, re-entrainment prevention, pollution abatement, odor control, energy savings and reliable, virtually maintenance-free performance are required.




C

On the cover . . . *At* ***Stanford University's Keck Science Building,*** *Palo Alto, California, eight Tri-Stack fans replaced 12 centrifugal fans for added performance and energy savings. The Tri-Stack fans are set in "quads," with each quad containing one operating fan and one standby; each fan provides approximately 25,000 CFM. New Strobic acoustical silencer nozzles are incorporated on four of the fans, with plans to retrofit the others as well.*

A. Tri-Stack systems at the ***University of Notre Dame's*** *South Bend, Indiana* ***Galvin Laboratory Complex*** *prevent re-entrainment of laboratory workstation fume hood exhaust into the building's ventilation air intakes. Studies to determine the fans' influence on noise levels around the building were performed prior to installation. UND's facilities managers did not want the mechanical sound of any exhaust fan to be heard within the building, or in the pedestrian and mall areas adjacent to it.*

B. Indoor air quality (IAQ) has become a popular subject in the hydrocarbon processing industry, particularly where laboratories conduct research generating caustic, toxic, noxious, odiferous or otherwise unwanted fumes that must be exhausted into the atmosphere. ***Ashland Specialty Chemical Company*** *and* ***Ashland Distribution Company*** *looked at this issue carefully while expanding their* ***Technical Center East*** *facility in Dublin, Ohio. The goal was to maximize employee protection, prevent exhaust re-entrainment, eliminate odiferous exhaust and lower maintenance and energy costs for laboratory workstation fume hood exhaust systems. Tri-Stack systems meet these requirements at the new 115,000 sq.ft. facility containing 100 dedicated laboratory workstations.*


B

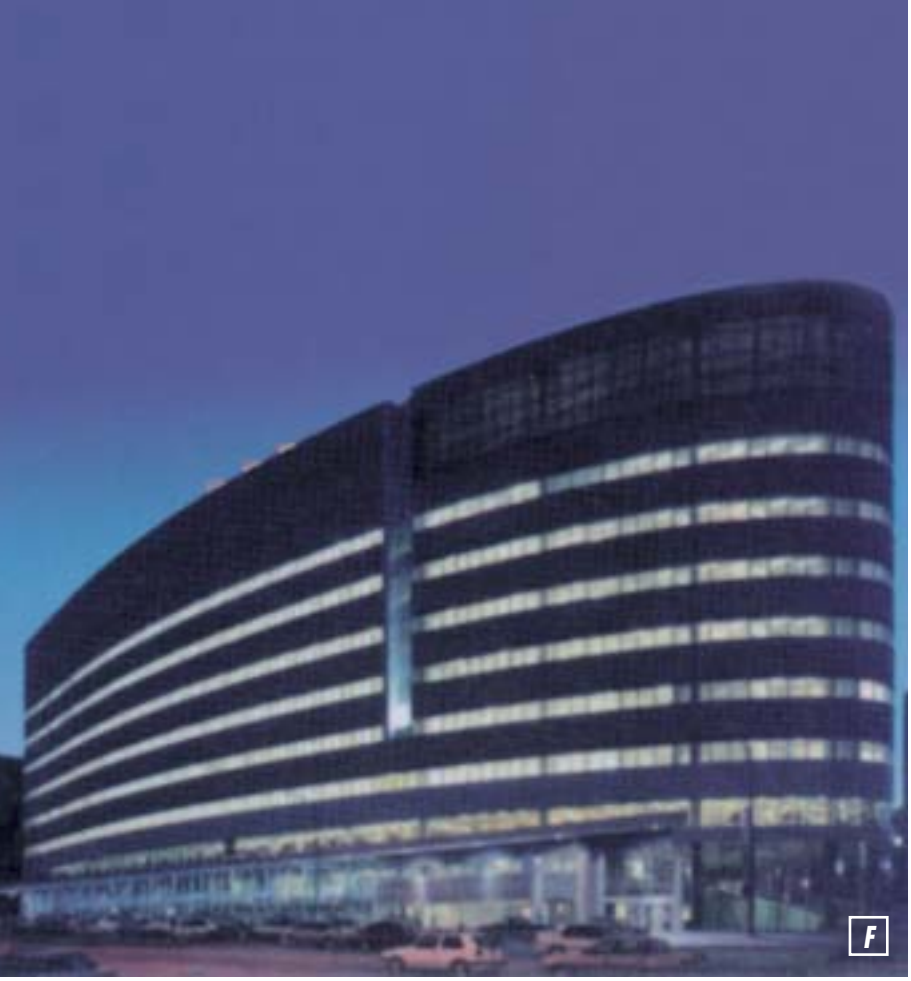
C. At the ***Viral Immunology Center at Georgia State University (GSU),*** *Atlanta, Georgia, Tri-Stack systems solve a number of dynamic issues at Biosafety Level 4 laboratories, where sophisticated viral studies are conducted. These types of laboratories could use agents such as tuberculosis and anthrax, as well as disease-causing microorganisms (bacteria) that can be contractible by aerosol means. The 2000 sq.ft. Level 4 laboratory required a dedicated air supply and exhaust system incorporating Tri-Stack laboratory fume hood exhaust fans. The fans were scaled larger than required to assure adequate static pressure since achieving desired airflow and pressure differentials is essential when designing and building containment laboratories.*

D. ***Albany Molecular Research, Inc.,*** *Albany, New York, is a fast growing pharmaceutical/biotechnology research organization that has expanded its facilities several times since starting up in 1991. Tri-Stack systems at one of its facilities replaced conventional centrifugal fans to eliminate re-entrainment and odor problems, with an additional benefit of substantial energy savings which are logged and tracked carefully by laboratory safety directors and facility managers.*

E. ***The Center for Environmental Science and Technology Management (CESTM)*** *for the State of New York, an ultra-modern 70,000 sq.ft. building housing 25 laboratory workstations, has three 17,000 CFM Tri-Stack laboratory fume hood exhaust systems to prevent exhaust re-entrainment and eliminate odor in the neighborhood.*


D


E



F. ***The University of Quebec at Montreal (UQAM)*** *installed Tri-Stack systems in its new ten-story, 400,000 sq.ft. laboratory building for its* ***Science Campus.*** *Tri-Stack systems serve 150 individual laboratory workstations using a variety of chemicals and materials, some of which are corrosive and noxious. Considerations for using Tri-Stack systems included prevention of re-entrainment and elimination of tall exhaust stacks.*

G. Scientists at the new ***LIED Transplant Center at Nebraska Health Systems, University of Nebraska Medical Center,*** *Omaha, Nebraska, conduct advanced biomedical research. One of the main considerations with regard to the Center's Tri-Stack systems was proper ventilation of 32 laboratory workstation fume hoods. Since prevention of exhaust re-entrainment was critical, wind tunnel tests were performed using models to determine affects of wind on the facility and surrounding buildings, as well as the surrounding buildings' affects on the new building. In addition to preventing re-entrainment, architects were concerned with "not having prominent exhaust stacks protruding above the roofline." These factors—along with odor elimination for neighboring facilities—led to management's decision to use Tri-Stack systems which exhaust about 70,000 CFM from the 251,000 sq.ft. building.*

H. Because many laboratory facilities require 100% makeup air for workstation environments, ***Neurogen Corp.*** *in Branford, Connecticut, looked for ways to cut its high energy costs at a new facility for chemical research. Tri-Stack systems were used for laboratory workstation fume hood exhaust to eliminate re-entrainment possibilities into the building's ventilation system; heat recovery coils filled with a solution of glycol and water at the 20,000 sq.ft. building extract heat from workstation fume hood exhaust before it is discharged above the roofline, reducing the need for natural gas to pre-heat (or pre-cool) makeup air. The Tri-Stack/heat recovery system increases intake air temperature by 10° F, resulting in a 30% reduction in heating energy costs.*

Tri-Stack Generation III roof exhaust systems...

First we invented the technology.
Then we perfected it.

For design/applications tips,
visit our web site:
www.strobicair.com or
www.met-pro.com/strobic.html
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