RUSKIN

Case Study

BUTTERFLY HOUSE & EDUCATION CENTER

Sophia M. Sachs Butterfly House & Education Center, St. Louis, MO

One of the key attractions of Faust Park in St. Louis, MO, is the Sophia M. Sachs Butterfly House & Education Center. This indoor butterfly conservatory and learning center offers its visitors a shining new world that takes them on a journey filled with excitement and surprises.

Home to approximately 60 different species of the world's most beautiful butterflies and a wide variety of plant life, the Butterfly House requires a fine balance of airflow, temperature and humidity. Without it, the eco-system inside the building would be threatened or possibly destroyed.

In order to help control the environment inside the conservatory, Ruskin's IAQ50 airflow measuring control dampers were installed by Vince Cutelli of Jarrell Mechanical Contractors *(www.cejarrell.com)*.

Ruskin Provides Solution to Delicate Problem

To provide consistent airflow to its butterfly inhabitants, the Butterfly House in St. Louis, MO, installed a Ruskin IAQ50 airflow measuring control damper with air monitor and straightener. The IAQ50 was chosen because of its accurate and reliable performance in helping to control airflow.

Designed to take on the toughest environments, the IAQ50 is also proving to be a valuable solution in the most delicate problems.

In addition to the IAQ50, Ruskin provided several other products, including:

- PHM Penthouses
- ELF375DXH Extruded Aluminum Louvers
- DIBD2SS Stainless Steel Fire Dampers
- DIBD2 Fire Dampers
- CD403 Control Dampers for Linear Airflow

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William Tao & Associates' *(www.wmtao.com)* President Richard Janis, and Project Manager, Mark Schaefer, designed a system that calls for primary and secondary fans in the equipment room. Although only one fan is required, additional fans provide continuous operation in case of emergency or repair. The plenum mounted IAQ50 monitors the supply air from the fan and provides a correlating output voltage signal to the building's automation system.

The adaptability of the IAQ50 convinced the engineers at William Tao & Associates to specify the damper for the project. Since the airflow quantities at the Butterfly House are larger than a conventional constant volume box can handle, the engineers suggested using the IAQ50 as a large-pressure, independent constant volume box. Ruskin worked closely with the rest of the team to make certain the minimum and maximum velocity ranges were maintained for the IAQ50.

Installation space presented a challenge for the engineers. The equipment room and fan location limited using conventional damper and air monitors. Ruskin's IAQ50 damper, air monitor and straightener with only an 11" depth proved to be the perfect solution. An advantage of the IAQ50 is that it can function in a turbulent supply air plenum and still give reliable control. By locating it in the supply air plenum, the engineers were able to prevent having the long inlet lengths that are required for conventional airflow measuring stations.

The local Ruskin Representative, Dave Fahrenhorst with Langendorf Supply Company *(www.lsco-inc.com),* provided the IAQ50 plus many other fire and control dampers, as well as rooftop penthouses.

In addition to the products used in this project, Ruskin's network of representatives provide a complete line of dampers and louvers. To learn more about all of Ruskin's products and services, or to find the Ruskin representative nearest you, visit our website at *www.ruskin.com* or call us at **(816) 761-7476.**

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