

DuctSox® Scores High Marks for Overall Performance at Cincinnati Gymnastics Academy



The white polyethylene fabric DuctSox blend perfectly with Cincinnati Gymnastics' all-white color scheme, which gives the training center an unusually clean, bright and cheerful ambience.

Cincinnati area gymnasts, from toddlers to Olympians, have been enjoying the brand new facility which was recently built by the Cincinnati Gymnastics Academy in Fairfield, Ohio, a suburb of Cincinnati. The interior of the 18,000-square-foot metal frame building features a 24-foot-high ceiling and a wide open, clear-span construction, with no walls or supporting columns obstructing the 120- by 150-foot gymnastics floor. Mary Lee Tracy, founder and owner of Cincinnati Gymnastics, was herself a gymnast and was assistant coach of the gold medal winning 1996 Olympics U.S. Women's Gymnastics Team. In fact, two Academy gymnasts were members of the women's team in 1996.

When the new building was in the planning phase, head gymnastics coach Steve Elliott had occasion to visit Parkette's Gymnastics in Allentown, Pennsylvania, another well-known gymnastics training center. There he discovered a heating and cooling ductwork system that looked

very different from any air dispersion system he had ever seen. He was told the system was DuctSox High Throw Series from Frommelt Safety Products (a division of Rite-Hite).

Elliott soon learned that DuctSox High Throw Series is an innovative and cost-saving fabric ductwork system designed to provide uniform air distribution in industrial, warehousing and commercial environments. In many cases, DuctSox can save more than 50% over conventional metal duct systems. The system consists of flexible, tube-like ducts made of non-permeable fabric with dispersion orifices sized and positioned to produce the optimum dispersion of the design airflow. In addition to uniform air distribution, DuctSox systems offer optimum flexibility, minimal maintenance and fast, easy installation. Sewn-in fabric loops attach the DuctSox to metal hooks on the air supply plenum, and the Sox are suspended from a cable suspension system using metal S-hooks.

Making the Decision for DuctSox

Elliott expressed interest in the DuctSox system, especially since the metal ductwork system in Cincinnati Gymnastics' old facility had not worked very well and was a source of problems. To obtain more information, Elliott was referred to The Keeler Company, Inc. in Shillington, Pennsylvania, the HVAC distributor who had sold the DuctSox system to Parkette's. As the Keeler salesman recalls, "Steve liked both the looks and the efficiency of the DuctSox system, so we provided product and pricing information to Cincinnati Gymnastics' management. When they discovered that the cost factor was favorable when compared with metal ductwork systems, they decided immediately to go with DuctSox."

The HVAC contractor for the new Cincinnati Gymnastics facility was Mechanical Solutions in Lebanon, Ohio. The project manager at Mechanical was also unfamiliar with DuctSox and admits to being somewhat skeptical at first that the fabric-based ductwork system could do the job. The company had previously installed air dispersion systems in large, open-span buildings, but they had always used traditional metal ductwork.

Explaining why Cincinnati Gymnastics did not spend a lot of time considering alternative systems, Elliott says, "The interior gymnastics space is designed to be very light, bright and reflective—unlike the drab look that prevails in many gymnasiums and athletic facilities. We had white walls, white I-beams and white insulation. The all-white DuctSox across the ceiling would be the perfect complement to our interior design scheme." (Note: DuctSox fabric is available in a variety of colors.)

Customized Design, A Team Effort

Design of the Cincinnati Gymnastic DuctSox system had to take into account the facility dimensions and layout, heating/cooling unit specifications, static pressure and supply fan CFM. With this information in hand and using a CAD system, Frommelt engineers made drawings



Athletes at Cincinnati Gymnastics Academy appreciate the draft-free, even temperatures provided by the DuctSox system that was designed specifically for their facility.

specifying the DuctSox length and diameter, orifice diameter and spacing, and zipper locations.

The Keeler Company coordinated the project with Mechanical Solutions and assisted in planning and customizing the DuctSox system for three main air handling units, each with an output of 4,000 CFM. Because of the 24-foot-high ceilings, the facility required a high-velocity air dispersion system that would move the air downward efficiently and uniformly

— an ideal application for DuctSox® High Throw Series.

The Cincinnati Gymnastics application called for three DuctSox in white polyethylene fabric, each 110 feet long and 20 inches in diameter, and having 63 two-inch orifices placed at four and eight o'clock positions on the Sox. The installation took approximately two days, with another day or two to fine-tune the system and synchronize it with the building's heating system.

Reliable Performance, Eye-Catching Appearance

The DuctSox system has been up and running at Cincinnati Gymnastics for over two months now. According to Elliott, its performance has been efficient and reliable. "There are no drafts," he says. "Even on cold winter days, we enjoy an even, comfortable temperature from wall to wall. The air is cleaner, too, thanks to the DuctSox and a supplementary filtering system we installed to keep the air free of chalk dust. We expect the DuctSox will be equally efficient on the cooling side when the summer heat arrives."

Elliott adds that visitors to the Academy are quick to notice the gym's bright and cheerful ambiance as well as the puffy white tubes across the ceiling. He doesn't hesitate to recommend DuctSox to coaches, managers and owners of other athletic training facilities, especially since the Sox require very little maintenance and their fire-retardant material meets standard building safety codes.

Versatile Enough For Many Applications

Mechanical Solutions personnel have commented positively on the DuctSox system's performance and efficiency in the gym, and believe that they are suited to a wide range of industrial applications as well. For this reason, they have passed along the DuctSox information to Control Solutions Group, a division of the company that evaluates and recommends energy-efficient retrofit solutions for industrial plants and factories.

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