

# They All Know Applied Air. Do You?



**CASE  
STUDY**

## **Cosco Warehouse Achieving 4 Degrees of Separation**

How do you efficiently heat a 700,000 square foot warehouse to 60° F on a 0° day with no more than 4° of variance anywhere in the building? For Cosco's Dorel Juvenile Group in Columbus, Indiana, the answer was easy.

Talk to Applied Air.



**Applied Air**

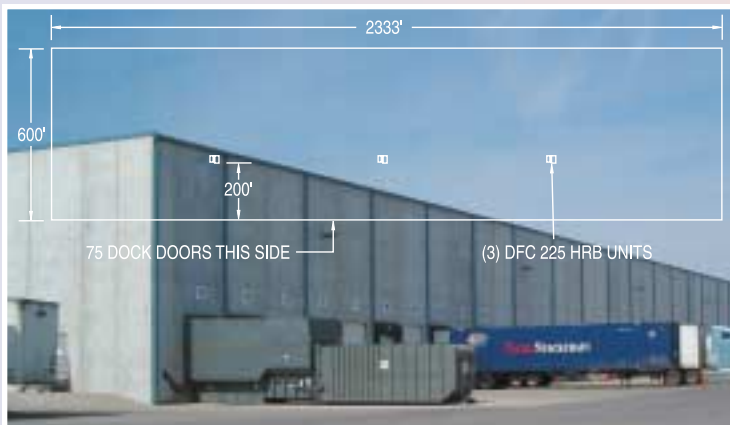
*The temperature control solution for important projects.*

## PROBLEM COSCO WANTED MORE THAN DIRECT-FIRED ROOFTOP UNITS.

Cosco's Dorel Juvenile Group had erected a 700,000 square foot warehouse in Columbus, Indiana, to house its inventory of infant car seats, strollers, high chairs and other juvenile-related merchandise. The space was enormous – large enough to house three Goodyear blimps – and the cost of heating it efficiently through Indiana's cold months would be a challenge. Not wanting to occupy valuable interior storage space with floor-mounted heating equipment, or display the engineered racking systems, the company contacted Applied Air to explore the options.

**SOLUTION** Applied Air analyzed the interior space, calculating the exact amount of CFM and BTUH required to heat the warehouse to 60° F on a 0° day with no more than 4° of variance anywhere in the building. In addition, pressurization effects during occupied and unoccupied periods were calculated to determine the proper equipment necessary for maintaining building pressure regardless of usage cycles. Applied Air recommended three model DFC 225 direct-fired rooftop units be installed – one 100 percent outside air unit and two re-circulating units – to achieve minimum capital cost and maximum operating efficiency. By using two types of make-up air units, Applied Air was able to address all usage cycles within the building, instead of simply promoting 100% make-up heating air units.

**RESULT** Applied Air's rooftop installation did not impact interior storage space at all. The creative combination of two types of make-up air units effectively achieved the heating and pressurization goals defined in the analysis, at an operating cost approximately 38 percent less than traditional heating systems. By using this solution, Cosco has been able to evenly and cleanly maintain its interior warehouse environment in accordance with its indoor air quality (IAQ) standards.



***“Having continuously monitored and charted our air temperatures and air quality at various locations within the warehouse, we have found Applied Air’s solution to be exactly within the tolerance of our IAQ standards. Applied Air’s creative recommendation saved us money up front and continues saving us money today.”***

Dan Ledwinka  
Facilities Management  
Dorel Juvenile Group

If you have a large warehouse to heat, contact Applied Air System to receive a “designer’s report” on how you can save heating costs by utilizing re-circulating systems versus 100% make-up air heating

type systems. Applied Air can also offer a computerized CFD study that will allow you to predict temperature variations and energy costs within your space for any type of heating equipment.

  
**Applied Air**

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