ActivAIR™

Engineered Comfort for Today's Buildings

Classic Design Made Flexible for Today's Architecture

A Tradition of Innovation: "What's Old is New Again"

Ever since Willis Carrier designed the first modern air-conditioning system in 1902, Carrier has led the world in the discovery of

innovative ways to provide occupant comfort using sustainable technologies that emphasize efficiency and environmental integrity. The induction beam of today is based on technology invented by Willis Carrier himself in the 1930s and refined by today's pioneers to meet the needs of the high performance building of the future. Efficient, cost-saving induction beams forward Dr. Carrier's original principles of utility, occupant comfort and resource accountability, transforming a treasured inheritance into a sustainable future.

A Legacy of Training

Willis H. Carrier began training members of the heating, ventilation, air conditioning and refrigeration industry in 1905. Carrier continues to promote technical expertise in the industry with the expansion of its sustainable solutions curriculum and has recently been named a U.S. Green Building Council Education Provider (USGBC EP).

To earn this status, Carrier's course materials were reviewed by a panel of USGBC peers and deemed to provide the high level of quality required for training Leadership in Energy and Environmental Design (LEED®) professionals. The courses and workshops supporting LEED-Accredited Professional and Green Associate credential maintenance are administered through Carrier University.

The Future of the World Depends on Our Ability... to Sustain it

improve

As the world's leader in high technology heating, air-conditioning and refrigeration solutions, we believe that market leadership requires environmental leadership. Carrier sets industry standards for environmentally sound business practices and a commitment to sustainability across its products, services and operations. We demonstrate this commitment by creating environmentally responsible solutions that consume less energy and incorporate innovations that improve the world — indoors and out.

Carrier

United Technologies

turn to the experts

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 Cat. No. 04-811-50027

ActivAIR™ Induction Beams

Engineered Comfort for Today's Buildings

Carrier

United Technologies

turn to the experts

Carrier ActivAIR™ Induction Beams... Engineered Comfort for Today's Buildings

ActivAIR™

Engineered Comfort for Today's Buildings

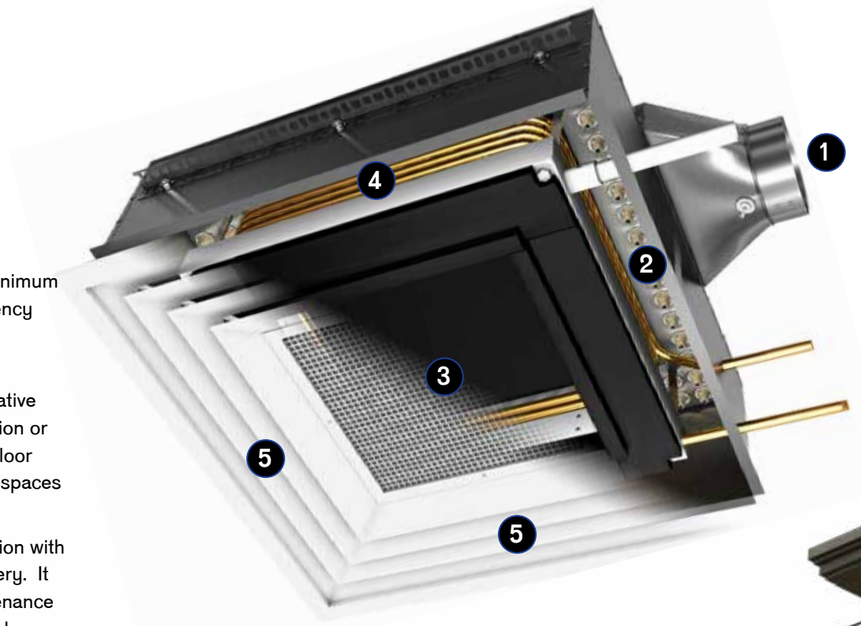
ActivAIR™... Innovative Technology from Carrier

When it comes to maximum occupant satisfaction with a minimum of installation and maintenance costs, high operating efficiency and a practical simplicity of design, the Carrier ActivAIR™ induction beam delivers exceptional performance.

The ActivAIR induction beam provides a cost-saving alternative to traditional commercial zoning systems for new construction or retrofit. It is suitable for use in a variety of single- to multi-floor facilities, from schools and universities to healthcare, office spaces and all applications in between.

The Carrier ActivAIR induction beam provides quiet operation with greater occupant comfort because of its draft-free air delivery. It also has no moving parts, and requires only minimal maintenance from the occupied space, making it ideal for dormitories and other applications where occupant privacy must be considered. ActivAIR utilizes smaller air handling units (AHUs) than traditional VAV systems, as it only supplies outdoor ventilation air to the space, thus reducing ducting sizes, which aids in reducing first cost.

Finally, ActivAIR induction beams assist in achieving Leadership in Energy and Environmental Design (LEED®)[1] credits under the Energy & Atmosphere and Indoor Environmental Quality categories.



1. *Primary air travels via ductwork from a dedicated outdoor air source.*
2. *Primary air travels through specialized nozzles that increase its velocity, creating a "velocity pressure differential" between the primary air and the room air.*
3. *The velocity pressure differential draws the room air into the return grille of the induction beam.*
4. *The room air passes across the coil and is then mixed with the primary air.*
5. *The mixed air is discharged through the louvers into the space, creating an even airflow distribution.*

More Performance. Less Units. Simple Operation.

With the ability to provide both sensible and latent cooling, the ActivAIR induction beam delivers more capacity per unit than sensible-only chilled beams, so spaces can be conditioned using fewer units. ActivAIR's coils have been independently tested and certified by the Air-Conditioning, Heating and Refrigeration Institute (AHRI). In addition, ActivAIR units have been independently tested by ETL®[2] Intertek®[2] for verification of unit heating and cooling performance, primary and induced airflow rates, and supply air distribution in the space. The unit's unique air distribution design creates a uniform temperature in the space, thus providing a comfortable environment with no stratification. In addition, ActivAIR requires only a simple thermostat connected to the coil valves, with no additional controls needed.

The Importance of an Integrated Drain Pan

Buildings are dynamic, with latent cooling loads that change over time. A large group of people enter a conference room, a door is left open, or air infiltrates the building envelope. These types of load fluctuations can cause condensation to occur at the beam. A drain pan provides peace of mind and eliminates risk of condensation in the space when latent loads fluctuate. As an added benefit, the integrated drain pan on the Carrier ActivAIR induction beam allows the specifying professional to design the system for use with chilled water that is below the dewpoint of the room. The ability to use colder water means a greater capacity of cooling can be produced by each induction beam unit while reducing chilled water distribution piping size and pump size.

Shown below is a Carrier ActivAIR™ induction beam terminal zoning system with AquaEdge® 23XRV chillers and Aero® 39 series air handlers (AHUs).