



Volume One / Issue 6
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PRODUCT

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PRODUCT

AXIS™ Underfloor System — learn all about Carrier's new underfloor HVAC systems from the floor up.

CASE STUDY

Journey to Egypt and see how Carrier is helping preserve millions of volumes and thousands of ancient and rare manuscripts for future generations.

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AXIS™ Underfloor System

Looking up when considering ductwork? With the Axis Underfloor system, you're standing on the solution.

Ideal for either new construction or retrofit projects, the Axis Underfloor system brings installation and energy savings with precise, individualized temperature control to high density or open office areas that are subject to changing needs.

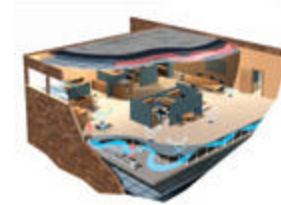
Underfloor installation of the utility and HVAC systems can realize time savings of up to 40% when compared to overhead systems resulting in faster build out and quicker tenant occupancy. And because of its modular design, any configuration changes to meet tenant needs are fast and easy.

Ductwork is reduced by up to 90% due to air movement within the cavity between the raised and floor slab allowing for smaller supply and exhaust fans while lowering static pressure.

Lower operating costs are realized through the improved efficiency of floor-to-ceiling airflow and the removal of ambient heat from overhead lighting before it enters the occupied space. Additionally, terminal controls provide Demand Control Ventilation (DCV) designed to provide maximum comfort with minimal energy usage.

The Axis Underfloor system also represents a new opportunity for improved IAQ. Now, occupants have greater control over their individualized space with a continual supply of fresh ventilation air that hasn't been mixed with stale or contaminated air that often collects near the ceiling. And as a result of its many operational and energy saving benefits, the Axis Underfloor system can help qualify for the U.S. Green Building's Leadership in Energy and Environmental Design (LEED™) credits.

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CASE STUDY

The Great Library of Alexandria

Carrier Keeps Millions of Books and Manuscripts Cool and Collected.



The new Great Library of Alexandria was designed to house up to 8,000,000 volumes and thousands of rare and ancient manuscripts. A new HVAC system was key to preserving these historic artifacts for future generations. The new system also needed to provide consistent, year-round comfort to visiting scholars, tourists and the library's staff of nearly 600.

The cooling system would also serve the rest of the complex, including the conference center, museums, planetarium, calligraphy institute and school of information studies. Project officials were particularly interested in the availability of service and replacement parts for the new system and Carrier provided an excellent, local organization for both.

To effectively and efficiently cool the 743,000 sq. ft. Great Library complex, Carrier installed four Evergreen® chillers, providing 3,200 tons of high efficiency cooling, using the non-ozone depleting refrigerant HFC-134a. Brine chillers were used, allowing for much cooler temperatures leaving the machines, a particular advantage with very large cooling installations. The system also includes fan coil units, variable air volume units and air handlers to deliver conditioned air where and when it is needed, and to maintain temperature consistency throughout the year.



The library complex is circular in design, with part the structure submerged in a pool of water. The inclined roof allows indirect daylight and a clear view of the sea.

The architect's simple circular shape was intended to evoke the Egyptian sun, shining on the seat of centuries of knowledge and enlightenment. Within, scholars can revive the ancient tradition of learning that is Alexandria's heritage. And they will do it in comfort, thanks to Carrier's leadership in preservation cooling and expertise in indoor climate control.

[Download the complete case study](#)

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