

NEWS



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NEW CARRIER HOURLY ANALYSIS PROGRAM (HAP) MAKES ENERGY ANALYSIS AND LOAD ESTIMATING EASY

SYRACUSE, N.Y., June 22, 2002 – With the progressing nationwide implementation of the *ASHRAE 90.1 Energy Standard for Buildings Except Low-Rise Residential Buildings*, the building industry is becoming more focused on the energy-efficiency of their HVAC system designs. Carrier Corporation's new entirely Windows™-based *Hourly Analysis Program (HAP)* provides consulting engineers with both a powerful energy analysis tool and a versatile load-estimating tool all in one simply-to-use package.

As an energy analysis tool, Carrier's HAP allows engineers to generate extensive, easy-to-read reports and graphs documenting the hourly, daily, monthly and annual energy and cost performance of almost any simulated heating, ventilation and air conditioning (HVAC) system.

Carrier's HAP contains a library of default and user-defined assemblies and templates, including air-handling systems, packaged equipment and central plant equipment, which simplify simulation set-ups. In addition to geography, siting, and shading, users can select to have analyses consider occupancy, scheduling and complex utility rates. HAP uses the standard Typical Meteorological Year (TMY) weather data and the Heat Extraction Method to link simulated system performance to the building model.

According to Jim Cullen, Carrier's Senior Manager of Systems Marketing and Software Tools, HAP performs a true 8760 hour energy simulation of building heat flow and equipment performance, unlike the simplifying assumptions used in some reduced hour-by-hour methods utilizing the average day concept. This accuracy is crucial when analyzing intermediate

CARRIER'S HOURLY ANALYSIS PROGRAM (HAP) – Page 2

seasons in moderate climates, or in part-load analysis of cooling equipment, Cullen says.

“For example, HAP can account for higher pull down loads typically found on Monday mornings in the summer and analyze the impact on electrical demand charges. Other reduced hour methods, using continuous and linear assumptions, can introduce significant inaccuracies,” Cullen explained.

As a load-estimating tool, Carrier’s HAP uses a system-based approach, tailoring sizing procedures and reports to the specific type of system being considered by the engineer. Central station air handling units, packaged rooftop units, split systems, fan coils and packaged terminal units can easily be designed, as can constant air volume (CAV) or variable air volume (VAV) systems, and single and multiple-zone systems. The ASHRAE-endorsed “Transfer Function Method” for calculating building heat flow ensures HAP’s calculation rigor and integrity.

Carrier’s HAP, with its user-friendly graphical user interface, is available in two separate versions: the full *Hourly Analysis Program*, which includes both system-based energy analysis and load estimating; or *HAP System Design Loads*, which includes the load estimating tool only.

For more information on HAP, or other Carrier HVAC software, visit the company’s web site: www.carrier-commercial.com/software; e-mail software.systems@carrier.utc.com; or call **1-800-CARRIER**.

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Celebrating 100 years of innovation and the invention of scientific air conditioning by its founder, Willis Haviland Carrier, Carrier Corporation is the world’s largest manufacturer of heating, air conditioning and refrigeration systems and equipment. It is a subsidiary of United Technologies Corporation (NYSE:UTX), provider of a broad range of high-technology products and support services to the aerospace and building systems industries.

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