

Johnson Controls' Metasys BACnet® Field Equipment Controller provides control using state-based techniques, continuous tuning of PID loops and pulse-modulated adaptive control of staged devices. Network sensors and input/output extension modules are included.

COOLING

Copeland Corporation's Copeland Scroll Digital™ for commercial air conditioning uses axial-scroll-compliance capability to unload the compressor without shutting down. This feature provides variable modulation between 10% and 100% capacity, without compressing refrigerant that is not needed for room cooling.

S-Class 35-50 ton (123–176 kW) packaged rooftop units from **Lennox International** provide a complete HVAC and indoor air quality solution for commercial buildings featuring bypass zoning and zoning applications.



Rheem Manufacturing Company, Air Conditioning Division's Rheem Prestige Series Comfort Control System applies advanced microprocessor technology to perform function moni-

toring, self-diagnosis and active protection on the company's 13 through 18 SEER air conditioners.

The York® Mini Cube with microchannel technology from **York Unitary Products Group** is the smallest air-conditioning system on the market. Microchannel technology allows for a 50% reduction in refrigerant and a 50% reduction in size, compared to traditional 13 SEER products.

HEATING

Bell & Gossett's Check-Trol® combines a flow control valve, an isolation valve and a companion flange into one valve, which greatly simplifies installation. The free-floating companion flange allows installers to orientate the valve handle in a convenient position for ease of use.

The UCB Boiler from **Cleaver-Brooks** offers lower energy consumption (fuel and electricity), lower emissions and extremely quiet operation while saving considerable floor space.

Robur's GAHP-AR offers a heating efficiency maximum of 140% (HHV), an operational range of ambient –4°F to 113°F, minimal heating capacity variation with air temperature, and 71% nominal capacity at –4°F.



Because the York® Affinity™ Modulating Gas Furnace from **York Unitary Products Group** maintains a constant temperature with fewer starts and stops, it is quieter and results in less wear and tear on heat exchangers.

INDOOR AIR QUALITY

The innovative features in the OMNI 3000 portable air sampler from **Sceptor Industries** include a high volume sampling rate (300 lpm) for a more representative sample in less time. The product saves the user time in sample collection, saves money typically spent on multiple sample media, improves detection sensitivity and provides analytical flexibility.



The testo 435: IAQ meter with wireless probes from **Testo** is one of 13 new Testo products that include wireless temperature and/or humidity probes. Simultaneous temperature and/or humidity measurements may be taken by one person from distances up to 65 ft (20 m).

The RC2110 Wireless Humidity/Dehumidification Controller from **Trs Systems** combines spread spectrum wireless humidity sensing technology, an intelligent sensing/control algorithm and remote communication over the Internet.

REFRIGERATION

Copeland's Intelligent Store™ Discus® Compressor provides a new level of control by integrating system electronics, gathering

Innovation Awards

The iServer Virtual Chart Recorder from **NEWPORT Electronics** features an embedded Web server. It serves active Web pages that display readings and charts on the browser, requiring no other software or drivers.



The Model 869 Micro-Cal™ Ultra-Low Pressure and Generating Calibrator from **Setra Systems** uses patented NASA low-pressure technology to give pressure reading accuracy close to 0.0001 in. w.c. and repeated pressure generation better than 0.0003 in. w.c.



The design of the Powerfoil™ **Big Ass Fans** allows a 24 ft (7.3 m) fan to move more than



337,000 cfm (159 000 L/s) of air per minute, 33% more than the company's Wickerbill airfoil. The winglet prevents vortexes, increasing energy efficiency by 71% from past designs.

The Comfort System™ VAV Diffuser from **Jackson Systems** is designed to maintain draft-free discharge air along the ceiling,



providing a sustained discharge velocity throughout the volume range. The diffuser includes a room thermostat for specific temperature setting.

Seiho International's Spot Diffuser Model: PK-K features a uniquely designed air guide that creates an air curtain that covers



the cold surface of the diffuser to prevent warm/moist air from touching the cold surface. This minimizes condensation buildup on the diffuser.

GREEN BUILDING **(Greenovation)**

The SONOXIDE® Ultrasonic Water Treatment from **Ashland Specialty Chemical, Drew Industrial** combines low-power, high-frequency ultrasound and a microbubble aeration to kill microorganisms without hazardous chemicals.

Robur's GAHP-W simultaneously produces hot and cold water for hydronic HVAC systems and geothermal applications using natural gas as the primary heating source. Its nominal heating efficiency is 139% (on HHV) and nominal cooling efficiency is 66% (on HHV).