PRODUCT APPLICATION

An ICONic development arises at Bradford White Corp.

hen industry giants combine forces, good things can happen. We've witnessed before how leading, non-competitive OEMs can be more than amicable passers-by in the same industry. This is the case with Honeywell's cooperative effort with both Bradford White and Laars Heating Systems Company.

At this year's AHR Expo, Bradford White announced the availability of its new ICON system, an acrossproduct-line gas valve with an array of brainy components, offering unprecedented safety for end-users, and a wide array of installation and service advantages for installers. The end result of their synergy gives the water heater manufacturer a huge advantage in today's competitive marketplace. And, at no additional cost to wholesalers, it's nothing short of a paradigm shift

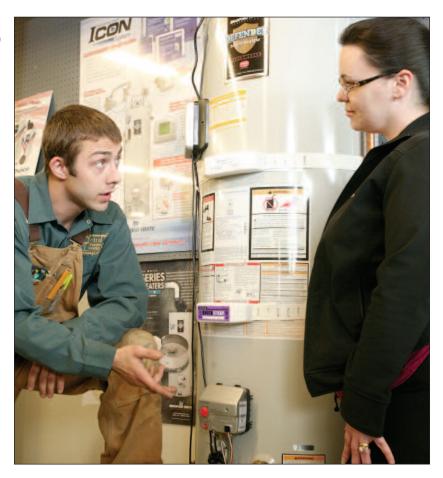
for the marketplace.

A revolutionary advance in water heating control

Available only to the professional installer and wholesaler, the ICON system is much more than a gas valve. And, assures the manufacturer, it's proven itself through rigorous use in more than 250,000 installed water heater models over the past three years.

"The ICON System has a lineup of features never seen on any water heater before," said Jason Fifer, product manager.

A microprocessor constantly monitors and controls the burner to ensure consistent and accurate water temperatures. The system also works as a diagnostics center for troubleshooting, using an LED light to prompt the installer during





installation.

The LED also indicates if the pilot flame is on. If it isn't, a built-in Piezo igniter eliminates the need to open the combustion chamber to light the pilot. The entire system is millivolt powered, so no external electricity is required. A thermopile, or a bundle of thermocouples, converts heat from the pilot flame into electricity to operate the gas valve and electronics.

A high strength polymer composite thermowell provides isolation between the electronic temperature sensor and the surrounding water. With this new development, there's no need to drain the tank when removing or replacing the gas valve.

Accessory module avails versatility

At the AHR Expo, Bradford White also introduced three accessory packages for the ICON System. All of the packages are powered and controlled by the accessory module which includes a multi-color LED status indicator which monitors each of the accessory packages. The module also features an audible alarm with a mute function. The alarm is activated if a leak occurs, and will deactivate automatically if the leak is corrected.

The "protection package" includes an electronic leak detection device that mounts at the base of the heater. If there's a leak, the device triggers the accessory module's alarm, and if there's a prolonged leak, the unit shuts down the burner.

"Once the leak is corrected, the

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accessory module will automatically silence the alarm and resume normal operation," continued Fifer. "If there is no drain pan, the protection package includes a rubber dam which can be installed around the base of the heater. The dam will retain enough water to activate the sensor."

To go hand in hand with the protection package is the "inlet shut-off valve package." This package will shut off the water supply to the water heater if the leak detection device senses a leak. It's an extra safety step beyond the audible alarm. The valve can be installed on the water heater or at any point upstream of the water heater. It features an integral wire harness for easy installation. The accessory module automatically opens the valve when the leak is corrected.

The two-part performance package is all about energy savings. The fully programmable LCD digital control offers full seven day, four period/day programmable control of the water heater. The four periods (wake, leave, return, and sleep) give the homeowner control of the set point for water temperature in the tank based on their usage patterns. Water is kept at optimum temperatures when it will most likely be needed, reducing the wait for hot water.

There's also a setback feature so that when the homeowner anticipates not needing hot water for an extended length of time, they can lower the set point temperature while out of town. The LCD display is very similar to a home heating and cooling thermostat, complete with a 30+-day backup battery.

"The control can save homeowners as much as 36 percent in energy use," said Fifer. "It also allows homeowners to program their water heater at the water heater or if wired remotely, anywhere in the home to operate only during the times hot water is required, saving energy and money."

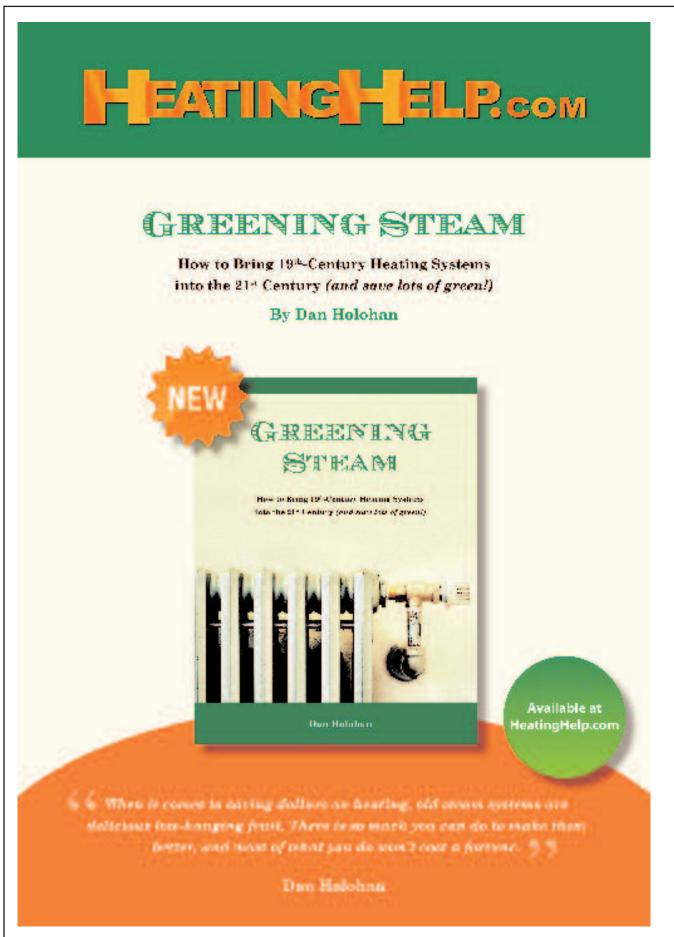
The second part of the performance package is the enhanced hot water delivery Integrated Mixing Device (IMD). By blending cold and hot water, the IMD allows water in the tank to be stored at higher temperatures while keeping the outlet temperature the same, which also increases the amount of useable hot water by as much as 50 percent. Maintaining a higher tank temperature (say, 140°F to 160°F) kills bacteria in the water supply.

The IMD incorporates several time-saving features. The first is a 1/4-inch NPT cold water port that can be used in place of a saddle valve when connecting to an ice maker. Also, a ½-inch NPT hot water line that can service a washing machine, dishwasher, or other hot water appliance and a ½" NPT recirculation inlet can be used for recirculation systems.

Simple to use, the IMD has a pushto-turn knob that sets the outlet temperature. It comes with a factory setting of 120°F. Requiring only 15 minutes of installation time, the device is much more quickly installed than a traditional mixing valve. "An adhesive thermo-strip indicator is included to so that it's easy to approximate the mixed hot water temperature," added Fifer. The strip saves time by eliminating the need to run water at a faucet in order to check system temperature.

"At the show we were asked several times a day: 'Why has Bradford White invested in such an advanced control technology?'

"In a word — customers," concluded Fifer. "Customers asked for a sophisticated yet simple control, one that gives them performance enhancements and diagnostic capabilities. We're confident we delivered that in spades."



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