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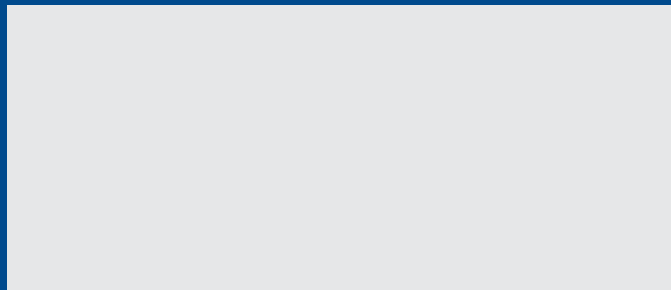
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**LAARS — The Hydronic
Industry's Innovations Leader
Product & Literature Spotlights**

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LAARS — The Hydronic Industry's Innovations Leader

-John Vastyan

Though recognized for its leading residential products, Moorpark, California-based LAARS Heating Systems (www.laars.com) has, for the past three years, focused its attention acutely on a new objective: to provide customers with the most advanced commercial hydronic and volume water technology available nationwide.

The result? A wave of new, cutting-edge technology that's stranded competitors.

"It came as a welcome surprise to many of our customers," says Bill Root, vice president of sales and marketing for LAARS. "For years - although we had some fine products on the market - we watched as other firms took the lead on the 'innovations' front. We decided in 2001 to change that for good. And, in the past two years, we introduced 15 new commercial models, now seen by contractors and consulting engineers as among the most advanced boilers available today."

The crown jewels of the company's new product lineup are the Rheos+ boilers/volume water heaters. Just introduced, and with capabilities that drew show attendees in droves at this year's ISH-NA show in Boston, where it made its debut, is the firm's Rheos+, the largest BTU capacity condensing boiler built in the U.S. And yet it fits through a standard, 36-inch doorway.

The high efficiency, fully-modulating Rheos+ commercial boiler/water heater provides industrial grade performance for hydronic and volume water applica-



Mike Elmore, LAARS territory service manager, inspects a Rheos boiler/water heater at the U.S. Water Polo National Training Center in Los Alamitos, CA.

tions with up to 98% combustion efficiency and the variability of modulation between 100% and 25% of the input rate to precisely meet heating load needs between 1.2 to 2.4 million BTUs. So, for example, their 2.4 million BTU boiler easily modulates down to 600 MBH.

The ultra-high efficiency of the Rheos+ cuts operating costs as much as 50 percent over conventional non-mod-

ulating systems - saving tens of thousands of dollars over the life of the equipment with payback on initial cost usually seen in just a few years.

It accomplishes the extraordinary efficiency with advanced combustion design, combining two internal heat exchangers - one copper, one stainless steel - and a sophisticated mixing system that permits condensation on the stainless heat exchanger, exclusively. It also has an internal water mixing system to allow minimum 60°F inlet temperatures and a built-in BAS interface. And, with its compact, through-the-door, fully-condensing, sealed combustion design and NOx emission levels of less than 10ppm, the Rheos+ is truly an innovative breakthrough for commercial heating needs.

Its one-year-older brother is the non-condensing, 1.2 to 2.4 million BTU Rheos, introduced in 2003. No doubt, it's got bragging rights that grab your attention, too.

Its innovative combustion design, modulated firing and efficient heat transfer systems spell fuel efficiency. Advanced controls sense

existing conditions and automatically adjust boiler performance to meet the required heating load, with seamless modulation of combustion from 50 to 100 percent of full input while maintaining maximum efficiency.

High-density performance makes LAARS Rheos products some of the most compact boilers available. Like the Rheos+, the Rheos measures just 34-1/2

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inches wide - ideally suited for replacement and new construction. The Rheos delivers a fuel efficiency of up to 87 percent, has a built-in BAS interface, and NOx emissions of less than 10 ppm.

Like the Rheos+, the Rheos' sealed combustion system meets or exceeds all regulations for emissions and greenhouse gases indoors and outdoors, and is fully certified for use in all 50 states and Canada.

LAARS Tackles the Snow at Mammoth Mountain

Two years ago, Mammoth Mountain Ski area in California set about to engineer an expansion program to get more skiers up to the slopes faster, they also looked for a new snowmelt solution for public thoroughfares. For years, they labored to spread volcanic cinders to make walkways passable. The cinders worked well enough but damaged paved surfaces outdoors and destroyed carpet and flooring indoors. Xcel

Mechanical of Gardena, CA, designed a radiant heating snowmelt solution for more than 13,000 square feet of walkway surfaces - with heat provided by a Rheos modulating boiler. Installed at an elevation of 8,000 feet, the Rheos provides hot water quickly and efficiently through several custom-designed HydroControl mixing panels.

The very day that the Rheos came on line, it came through in a pinch. The system provided the snowmelt capacity to handle a sudden, unexpected snowstorm, one that dropped six feet of snow overnight. It was just the start of the season; the Mammoth region gets an average of 32 feet of snow each year!

Fantasyland Project Meets Real World Expectations

For guests at the 355-room Fantasyland Hotel - as with any other hotel facility - hot water on demand in any quantity is simply not negotiable. But the two aging boilers installed in the luxury facility located in the West Edmonton Mall in Alberta, Canada, were having trouble keeping up with guest demand. It seems that the combination of the 5.2 million square foot mall and the uniquely themed rooms had pushed occupancy far beyond expectations, and the boilers were stretched to the limit to keep up with everyday requirements.

To make matters more challenging, replacement boilers would have to fit within the existing mechanical room on the penthouse floor, and would need to get there without the aid of a crane. And, of course, interruption of hot water service was not an option.

T&P Mechanical Services of Edmonton designed a new installation to meet these challenges using three Rheos systems. One of the old boilers was removed, and two of the Rheos units went up the elevator to replace them without a hitch. Good planning had this new

equipment up and running in a matter of hours without impacting guest comfort. The second old boiler was then removed and the third Rheos unit installed to complete the project.

Results have been exceptional. The modulating operation of the Rheos boilers boosted hot water heating efficien-



Kevin Michel, president of Gardena, CA-based Xcel Mechanical, examines the installation of a Rheos boiler at Mammoth Mountain ski resort.

cies far above expectations, achieving a significant reduction in natural gas consumption. Using the three Rheos 2.4 million BTU/hour boilers in conjunction with two existing insulated water storage tanks means that there is always plenty of hot water available no matter what the demand.

Another gem in the commercial boiler/water heater collection is the Pennant series. This equipment provides one of the most flexible modular designs in the industry. Pennant boilers, water heaters and pool heaters rank among the most versatile and environmentally friendly systems available on the market. The fan-assisted units are easy to use and easy to install and maintain in commercial hydronic and hot water applications from 500 to 2,000 MBTU/hour, and work effectively in altitudes up to 10,000 feet - even in harsh environments from -40° to +140°F.

Modular construction begins in the combustion chamber, with a 10-tube, finned heat exchanger, separate burner trays and manifolds, gas train and blower assembly that together offer thermal



A Pennant boiler gets a pre-fire inspection at the Los Alamitos Olympic pool facility.

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efficiency up to 85 percent with NO_x emissions below 10 ppm. The sealed combustion chamber can employ either ambient or outside air ducted directly to the unit. Similarly, a Pennant can be vented vertically using standard B-vent, or horizontally for up to 50 feet and three elbows using AL29-4C stainless steel. Vent and combustion air connections can be located on the top or back of the unit in any combination. Units are even stackable on LAARS racks to maximize water-heating capacity in the smallest possible footprint. And to keep installation simple, installers can select six different modes of operation with the press of a button to exactly match application requirements.

Since all major components are modular, they can easily be accessed and/or replaced, often from both the front and the top of the Pennant boiler. All controls are service friendly too - with complete front panel indicator lights for status and operating conditions, and clean and simple wiring accessible from a slide out drawer.

LAARS Pennants Earn Advanced Degree at Boise State

With its 35-year-old boiler complex that provided domestic hot water in the 185,000 square-foot Student Union not making the grade, Boise State University (BSU) administrators looked for a new solution. The challenges were to fit the new boiler installation into tight quarters within the small footprint available in the existing building, while minimizing downtime that would impact student life in the heart of the campus.

BSU ultimately selected two Pennant boilers as replacement units for the difficult installation. The Pennant's 29-3/4 inch width fit easily through the existing doorways for a smooth installation. To

expedite things, the maintenance staff preconfigured the plumbing and venting



High-efficiency Pennant (left) and Rheos (right) boilers are prepared for start-up prior to heating the Olympic pool's 649,000 gallons of water, now at an annual savings of \$5,000.

systems, making way for a speedy installation slated for Memorial Day weekend. It began on Sunday afternoon and was complete in the early hours of Monday morning, well ahead of schedule.

Greatly enhanced operating efficiency provides significant savings in fuel costs. And, with the tandem boilers configured to provide continuous backup for each other, there has never been a lack of hot water on demand at the Student Union.

The LAARS Product Family

With more than 100,000 successful installations across North America, the Laars Mighty Therm line of gas-fired, 175 to 500 MBH volume water heaters and hydronic boilers are the field proven workhorses of the commercial world for both indoor and outdoor applications with efficiencies of 82 percent.

Then there's the company's Mighty Stack. Supplied with or without a storage tank, these units provide an innovative solution to the short life and high energy consumption typical of direct-fired, tank-type water heaters. Mighty Stack units deliver up to 83 percent thermal efficiency, cost less to install because of their

small footprint, and save significant capital expenses by ending the replacement cycle so common with "fired tank" water heaters.

And we can't ignore the firm's commercial pool heater line for capacities from 500 to 5,000 MBH. Rheos and Pennant pool heaters can be configured together or separately to deliver the precise response to water heating demand to optimize efficiency for any pool heating application.

Since both Rheos and Pennant pool heaters can be installed indoors or outdoors in the elements, they can stand up to the environmental extremes encountered in any pool heating application. You can even specify cupronickel alloys for the heat exchanger for optimum chemical resistance for salt water pools. Pennant "CP" commercial swimming pool heaters offer the added features of a built-in automatic by-pass system with a three-way valve, electronic actuator, and an exceptionally accurate mixing control. In addition, all Pennant pool heaters come with their own circulating pump for primary/secondary installations, and a backwash switch to safely suspend heater operation when it's time to backwash the pool filter system.

Are you thoroughly satisfied with the commercial hydronic or pool heating equipment you install? If not, you owe it to yourself and your customers to see what the innovations leader has to offer. Find them at www.laars.com. ■

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