



endless

success stories

Replacing traditional boilers and tank water heaters with Rinnai tankless units and the Rinnai Tankless Rack System allows Atlanta Motor Speedway to offer guests an endless supply of hot water while simplifying maintenance between events and reducing utility costs.

Racetracks, outdoor concert venues and other event locations need to be able to provide hot water in large quantities without running out – especially if overnight camping is allowed on site. However, these facilities are unique in that they also have long periods of time when they are inactive and no hot water is needed. Tankless water heating technology is the ideal solution for such establishments because it offers an endless supply of hot water that is heated on demand, so no energy is wasted heating and reheating a tank water heater or boiler system that is not being used.

CONSISTENT HOT WATER, ONLY WHEN NEEDED

Located on 837 acres, Atlanta Motor Speedway hosts more than 150,000 attendees during NASCAR race weekend each spring. With approximately 20,000 people staying on the Speedway campgrounds, it is not surprising that the facility's 84 showers require a significant amount of hot water. In addition to Atlanta Motor Speedway's four shower stations, the track features a banquet kitchen to serve the grandstand suites along with 20 concession stands – all of which require consistent hot water.

Although race attendees have been thankful for the AMS shower stations since their construction in 1995 and 2001; over the years racing fans learned that the AMS showers occasionally could run out of hot water during times of heavy use. Consequently, when Rinnai joined as a sponsor of the Rinnai 250 at AMS in 2017, it seemed like the natural time to replace the facility's existing boiler and traditional tank water heating units with a state-of-the-art Rinnai tankless system.

Rinnai's Application Engineering Center of Excellence evaluated AMS's water heating needs and designed a system that would be more efficient and reliable than its existing system. Soon two local Rinnai dealers, Houston Armour, Inc. and Action Plumbing Company, began the installation of 30 tankless units on the AMS campus.

20K
CAMPERS



84
SHOWERS

AMS INSTALLATION HIGHLIGHTS

Main Shower Station

AMS's largest shower station is located just outside the track walls near the facility's Family Campgrounds. Previously, the building housed a 1.2 million BTU boiler — despite the capacity of the tank, the system could not keep up with the hot water requirements, and attendees periodically experienced cold showers.

The AMS situation:

- 42 showers and 20 sinks
- 200-gallon storage tank
- 1.2 million BTU boiler

The Rinnai solution:

- replacement of the old boiler and tank with the Freestanding Tankless Rack System™
- two banks of six C199iP tankless units
- 2.4 million BTU
- offers 96 percent thermal efficiency
- 100 percent diversity (By comparison, hotels typically are sized to 50 percent diversity and assume only half of the facility's showers are in use at once)
- all 42 showers may be in use at the same time

Because the shower station is out of use for most of the year, a key benefit of tankless technology that is especially relevant for AMS is how easily it is to turn off the system. Previously, AMS had to choose between leaving its old boiler-tank system running during periods of non-use or powering down the system and draining the tank, which is quite a cumbersome feat. In contrast, turning off the Rinnai system is as simple as flipping the switch to turn off the recirculation pump. No draining or special maintenance needed!



Lakeside Shower Station

Located due east of the track is the other shower station servicing AMS's outside campgrounds. The finite amount of hot water could be an issue in times of high demand.

The AMS situation:

- 16 showers and 8 sinks
- two standard 100-gallon, 199,000-BTU tank water heaters

The Rinnai solution:

- replacement of the two atmospheric tanks with the Wall-Mounted Tankless Rack System™ featuring 1 TRW02iP and 1 TRW03iP with concentric venting
- 1,000,000 BTU available across the five C199iP units

In addition to the attendee comfort, redundancy and maintenance benefits found at the main shower station, the Rinnai installation at this location provided space savings. While the previous commercial tanks took up the building's entire utility closet, the positioning of the tankless units on the wall turned much of the closet into useable space that now serves as storage for various cleaning supplies.

“Rinnai has been an amazing partner – from the design of the tankless system to its installation to its operation, **Rinnai has exceeded expectations every step of the way.** We're excited to realize the positive impact Rinnai's tankless technology will have on AMS over the years to come.”

— KIM SNIDER, BUSINESS DEVELOPMENT MANAGER

Infield Shower Stations

AMS also has two shower stations inside the track walls that are used by attendees staying at the Infield Campgrounds.

The AMS situation:

- 24 showers and 12 sinks
- two standard 100-gallon, electric tank water heaters

The Rinnai solution:

- installation of two propane tanks at each shower station to facilitate Rinnai's tankless technology
- installation of Wall-Mounted Tankless Rack System™ on exterior wall

This allowed the utility closet in each building to become useable space. In both of the installations, these same units also supplied hot water to an adjacent concession stand; **thereby removing the need for a separate hot water supply for the concession area.**



IMPACT OF TANKLESS TECHNOLOGY

Since Rinnai redesigned and implemented its tankless technology at AMS, the facility has found the system to be a vast improvement over its previous water heating solutions. AMS' operations staff has significantly reduced the amount of time spent preparing the system for use and powering the system down after an event's conclusion. In addition, the space savings that accompanied the installation of the tankless units has allowed for the streamlining of facility cleaning processes.

Furthermore, the energy savings that accompanied AMS' tankless installation seems to be translating to reduced utility costs. The facility saw its **utility costs decrease by over 20 percent** through March-April 2017 when compared to the same time period last year, and the staff attributes the bulk of this reduction to the new tankless system.

Grandstand Concession Stands

The AMS Grandstand area is home to 20 different concession stands, which each require a high volume of hot water for cooking and dishwashing during race weekend. Rinnai's Applications Engineering Center of Excellence determined that multiple concession stands could share the hot water supplied by a single tankless unit.

The AMS situation:

- 20 concession stands
- 12 standard 100-gallon, gas and electric tank water heaters

The Rinnai solution:

- replacement of 12 electric tanks with 11 tankless units

In instances where a single tankless unit powered three or more concession stands, Rinnai opted to install models with built-in ThermaCirc360™ technology, which keeps a steady amount of heated water in the supply line during active circulation periods. This makes hot water quickly available at the point of use – even if the concession stand is located a distance from the tankless unit.

As with the shower stations, the removal of the tank water heater from the concession stand environment created more useable space, which is extremely beneficial given space is often at a premium in food preparation areas.



THE RINNAI ADVANTAGE

- Endless supply of hot water
- Built-in redundancy - never experience downtime during events
- Ability to service without system shutdowns
- Save money - installation, maintenance and operational cost savings
- Save space - no tanks needed
- Green - lower CO2 emissions

THE RINNAI ADVANTAGE FOR TANKLESS RACK SYSTEMS

- Endless supply of hot water delivered up to 9.8 GPM per unit
- Digital temperature displays provide error codes and other diagnostics for easy maintenance
- 96% thermal efficiency
- Commercial ENERGY STAR® certified
- Indoor/outdoor/wall/floor-mount installations
- Multiple venting options (concentric, common vent or dual-pipe PVC/CPVC, PP)
- Available factory-direct preventive maintenance

For more information on commercial water heating solutions, maintenance services and a free sizing consultation by Rinnai Applications Engineers, call **866-383-0707** or visit **rinnai.us/commercial**.

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