



AN A. O. SMITH CASE STUDY

California Hotel Installs A. O. Smith CHP-120 Heat Pump Water Heaters to Maximize Hot Water Efficiency

The staff at Spark by Hilton™ in Redlands, California, turned to A. O. Smith for a water heater capable of providing ample hot water to their hotel. It's no simple task to supply hot water all day, every day, to a hotel with 85 rooms, a kitchen and multiple commercial laundry facilities. But for A. O. Smith, it was the perfect opportunity to showcase the power of the CHP-120 Fully Integrated Commercial Heat Pump Water Heater (HPWH). The hotel chose to install four CHP-120 HPWH units—all of which function as part of a single fully integrated water heating system. It was critically important to the specifying engineer that the system be integrated as it makes installation significantly easier and is more cost-effective for the hotel.

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Power Solutions. "The CHP-120 unit is more compact, which means our team does not have to worry about the typical mechanical room space constraints associated with an average commercial unit. We also do not have to worry about additional space for insulation or the need for a large pipe for the system, which makes my job very simple and easy."

"It takes two days to install the units, with only 10 hours of water shutoff required. After those ten hours of work, your machine will be set to run," noted Yoon. "There is not much maintenance needed except a filter replacement every year or every other year, so I love it."

CASE NOTES

Project:

The staff at Spark by Hilton™ in California turned to A. O. Smith to fulfill the need for ample hot water at a lower cost for the new hotel. It's no simple task to efficiently provide hot water all day, every day, to a hotel with 85 rooms, a kitchen and multiple laundry facilities. But it was the perfect opportunity to showcase A. O. Smith's CHP-120 Fully Integrated Commercial Heat Pump Water Heater (HPWH), which features an industry-leading 4.3 Coefficient of Performance (COP).

Location:

Redlands, California

Products Used:

Four A. O. Smith CHP-120 Fully Integrated Commercial Heat Pump Water Heaters

Product Overview

- Industry-leading 4.3 Coefficient of Performance (COP)
- ENERGY STAR® certified
- Heat pump technology provides a more energy-efficient way to heat water with electricity
- Integrated 119-gallon tank enables heat pump to operate more frequently, saving money
- Three operating modes (Efficiency, Hybrid, and Electric) maximize efficiency while meeting specific hot water demands
- First-hour delivery exceeds 194 GPH
- Dual 6 kW heating elements provide additional heating capability for periods of high demand
- Maximum water temperature of 150° F in Efficiency and Hybrid modes, and 180° F in Electric mode
- Large touchscreen LCD display allows for mode selection, provides run information, and includes troubleshooting alerts and details

For More Information:

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Beyond improving the installation process, the CHP-120 HPWH provides the hotel with incredible cost savings on energy. The CHP-120 unit is four times more efficient than a standard electric water heater, saving the hotel up to \$3,000 per unit on their annual electric bills. The CHP-120 does this by moving heat from the surrounding air rather than creating heat, allowing it to run at an industry-leading 4.3 Coefficient of Performance (COP).

The CHP-120 HPWH comes with three different operating modes for maximum efficiency. The three operating modes (Efficiency, Hybrid, and Electric) allow facility managers to adjust as needed to meet the hotel's varying hot water demands. Facility managers can easily switch between modes due to the CHP-120 unit's large touchscreen LCD display, which allows for mode selection and displays run information, including troubleshooting alerts and details. Dual 6 kW heating elements integrated into the unit provide additional heating capability for periods of high demand. This feature ensures that even when the hotel reaches maximum capacity, it can still supply ample hot water to customers, even those staying on the highest floors.

"We used to get customer complaints about not getting hot water on the higher floors of the hotel, but since installing A. O. Smith's CHP-120 units there have been no customer complaints," said the hotel manager. "The hot water on the first floor is the same temperature hot water that guests experience on the third floor of the hotel."

In addition to improving the guest experience, the CHP-120 unit also qualifies for significant utility rebates in the state of California. Payback time on the investment of installing a unit is expected to be just under two years.

"With the current rebate program, it's almost cost-free to the customer," said Yoon. "When replacing an old boiler, the investment in new technology is typically the biggest barrier, but with the CHP-120 HPWH we received a big rebate up front. California has aggressive energy savings goals, so they provide generous rebates on high-efficiency technology like the CHP-120 model. We received \$20,000 in rebates for each unit that we installed at the Spark Hotel."

"Going from a gas-fired water heater to the CHP-120 HPWH, the savings are dramatic. Customers could be wasting thousands of dollars a year by not making the switch," said Anthony Sun, Delco salesman. "Once the CHP-120 unit is installed, it can run in efficiency mode by using just the compressor, the cool air and the hot air in the room to heat the water, saving the hotel money and energy."

Find more information about the CHP-120 HPWH and other products at www.hotwater.com.

