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Moving on up

Tankless water heaters provide lifeblood to Bay Area apartment complex.

AVA 55 Ninth apartment complex in San Francisco.

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Q&As

Navien's tankless technology is ideal for commercial applications

How do Navien tankless water heaters compare to other tankless water heaters?

Navien produces extremely efficient condensing tankless water heaters that offer greater efficiency and output. Navien's NPE-240S, for example, with a 0.99EF and input of 199,900 BTU/h is capable of outputting 3.95 GPM max at 100° F rise compared to 3.26 gpm max from a 199,000BTU/h, 0.82EF unit.

If a light commercial application required 15 gpm at a 100° rise, the Navien NPE series could accomplish the task with four units vs. five. Whether it is higher temperature commercial application or lower temperature residential applications, the operational efficiency of condensing tankless units shouldn't be ignored.

Can tankless water heaters work in a commercial environment?

Absolutely! Besides condensing tankless water heaters offering the highest operating efficiencies available in water heating, there are so many other benefits to consider. Some of these would be space savings, sealed combustion capability and common venting with simple materials such as PVC, CPVC and polypropylene.

Also, it should be should mentioned; system redundancy, consistent water temperatures, ease of location with relationship to fixture use requirements and better warranties than many other options. Lastly, the units have lower system installed costs versus numerous other commercial water heating options.

How are tankless water heater(s) sized, especially to commercial applications?

The count required is determined by the peak flow calculated by the fixtures and the



type of application. Most of us use the hot water fixture unit (HWFU) charts for specific applications and refer to the Hunters Curve for the peak gpm required for the given HWFU counts. Once we know that we can refer to the tankless unit performance specifications and determine with the required temperature rise how many tankless units will be required.

Are storage tanks needed with commercial tankless systems?

First, we like to refer to them as "Booster Tanks." A properly designed tankless with booster tanks requires proper piping to allow the booster tank to supplement the tankless hot water production.

Adding booster tanks to a tankless system is typically done for the following reasons; 1. Insufficient gas service to meet the tankless count required to meet peak gpm. 2. A high peak gpm draw will occur that a sufficient count of tankless units cannot be installed

to meet this requirement. It can't go without mention however that adding a booster tank(s) to condensing tankless will significantly lower its published operational efficiency.

In commercial applications, what is the best way to address multi-temperature requirements?

Frequently the lower temperature requirement exceeds the high temperature needs. Take for example a travelers' hotel with a 100 rooms or so and the kitchen to provide that "free" hot breakfast. The rooms would suffice with 120° temperature water while the kitchen and laundry requires a higher set point.

Often it's best to recommend the installation of two separately operated banks of tankless water heaters set at the appropriate temperatures. Rarely does it change the overall count by two to three units and operating in this manner enhances both the low and the high temperature operation efficiency. Combined with simpler mixing valves if required and separate hot water services, the endless consistent hot water will be available.

Are recirculation requirements difficult to achieve with tankless water heaters?

It can be, but not with the Navien NPE-A series tankless water heaters and Comfort-Flow® Technology. With long distance recirculation capabilities of up to 500' from our internally mounted circulators, recirculation can be easily achieved in most light commercial applications. In the event that an external building circulator is required or desired, our internal pumps are capable of keeping the hot water header charged with set point temperature water.