

Showers, Washrooms, and Kitchen at Atlanta International Airport Customer Lounge



Eemax SpecAdvantage



Challenge

- Long downtime between uses creates high storage costs with large tanks
- Upsizing of natural gas lines and venting is difficult and expensive
- Wide range of flow rates (0.5 GPM – 24 GPM) to feed up to 8 lavs, 8 showers, dishwasher and kitchen sink
- Need 70°F temperature rise
- Mechanical room located 100 ft from washrooms

Solutions

Eemax application engineers were engaged to specify the system based on customer requirements. Tankless heaters are piped in parallel then feed into a 120-gallon commercial tank heater on a recirculation loop. The Eemax tankless units provide heating when flow rate exceeds 4 GPM. The tank heater provides hot water for the low flow needs and the recirculation system. The result of pairing the tank and tankless heaters is a best of both worlds solution minimizing storage losses while delivering on-demand hot water.

Used qty (2) Eemax SpecAdvantage PhD AP096480 - 96 kW (327,000 BTU/H), 480 volt, 140°F output temp.

Installer Benefits

- Quick product delivery
- Simple piping schematic created by Eemax promotes proper installation
- Utilizing electric heaters eliminates gas lines and venting problems
- Labor savings with 70 lb tankless heater vs 430 lb tank heater

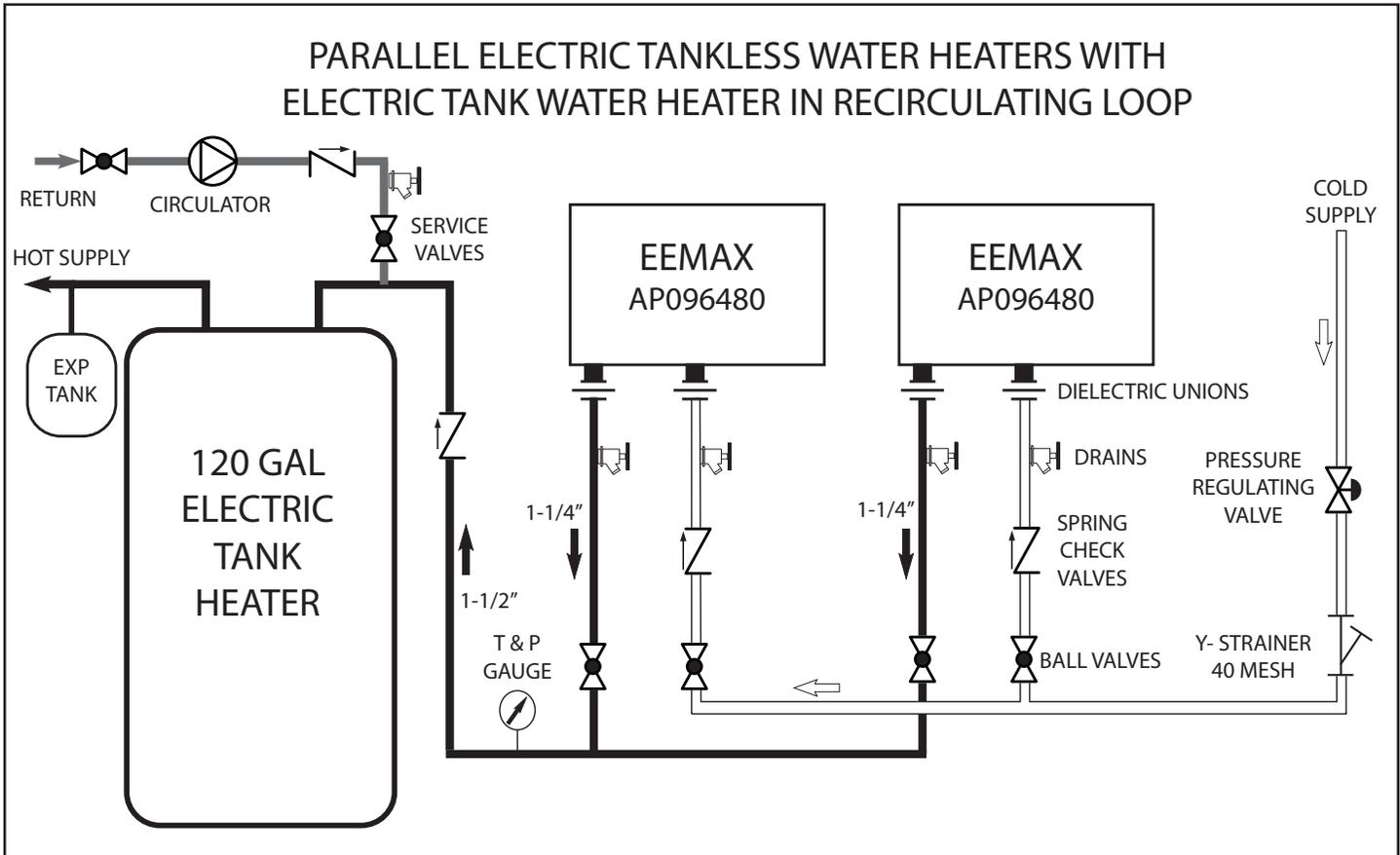
User Benefits

- Tankless temperature output of +/- 1°F
- Endless hot water
- Fast hot water delivery

Owner Benefits

- Small footprint compared to multiple tanks creates more usable floor space
- A low maintenance / long life system resulting from low run times
- Eliminating (3) 120 gallon tank heaters saves over \$1700 per year in energy costs
- Installed costs comparable to multi-storage tank system

HIGH VOLUME DOMESTIC HOT WATER IN RETROFIT OF HOSPITALITY SPACE



Commercial 120 Gallon Electric Tank Storage Loss

Tank Energy Factor (EF) rating	0.94
Temp of hot water (°F)	140
Incoming cold water temp into heater (°F)	53
Ambient air temp (°F)	65
Heat loss through tank (Btu/hr)	2079
Heat loss through tank (kW)	0.61
Electricity cost per kW-hr (\$)	\$0.110
Storage cost of hot water (\$/ year)	\$587

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