

Why does NHEC recommend and stock only 3800 watt element water heaters?

- The 3800 watt element is the same size as the 4500-watt element, but has reduced wattage going through it. This is known as “watt density.” As you reduce watt density it reduces the surface temperature of the element resulting in reduced thermal stress and less mineral build-up. The combination of lower watt density and less mineral build-up will increase the service life of these elements; especially in harsh water conditions (if you install 4500 watt elements in harsh water conditions you can expect to replace the elements more frequently than if you install 3800 watt elements).
- The wiring requirements are less stringent for 3800 watt elements than for 4500 watt elements. A 4500-watt element requires 10/2 wire and a 30 amp (220volt) breaker. The 3800 can be wired with 12/2 wire and a 20 amp breaker. This may be an important consideration in an older home that may have limited capacity in the electric panel or already have the lighter gauge wiring installed. This will more likely allow customers to install the 3800 watt Marathon without having to upgrade the wiring or service.
- Although the 3800 watt elements have a slightly longer recovery rate than the 4500 watt elements, if your water heater is sized properly for your specific use you should never notice any difference.