



Do SioGreen Quartz Infrared Electric Tankless Water Heaters work in cold climates?

Wisconsin Case Study

We recently completed a test installation in Wisconsin to determine if the **SIO 18 Pro/Pro Flex** would perform adequately in a colder climate. Here are the results:

Situation: The customer frequently would run out of hot water when several family members would take back-to-back showers. He has a 50 gallon gas tank heater and would add cold water to the hot water to extend the volume of heated water.

Solution: We recommended a test to determine if we could supply enough preheated water to the gas tank heater to provide a continuous flow of hot water. A SIO 18 Pro was installed to boost the gas water heater by adding heated water to the tank rather than cold water requiring recovery time.



Results: The incoming water temperature was approximately 50 degrees. The tank heater was set at 115 – 120 degrees. The SIO 18 Pro was also set at 115 degrees... a 65 degree rise.





Test 1: A single shower with a 1.5 GPM low flow shower head was turned on and ran for 45 minutes. (67.5 Gallons) The water continued to flow at 104 degrees with some cold water added to the flow to achieve a comfortable temperature. In this test, the gas tank heater did come on occasionally to maintain the temperature. There was no noticeable reduction in the flow rate.



Test 2: The temperature on the SIO 18 Pro was increased to 120 degrees and the test was run again. This time the shower ran for 60 minutes (90 Gallons) and the gas heater never came on. Also, the gas heater did not go into recovery mode to reheat any water.

Test 3: Two showers were turned on simultaneously and run for 45 minutes. (135 Gallons) There was no noticeable reduction in flow and the hot water temperature remained at 104 degrees. Again, the gas heater never came on during the test.

Conclusion: The SIO 18 Pro performed without any issues. The goal was to provide a continuous flow of hot water for extended periods without using any additional energy and eliminating the recovery time. (In all cases, the amount of water used exceeded the capacity of the tank and would have required time to recover.) These goals were successfully achieved and demonstrated the viability of the SIO 18 Pro as a booster unit to existing tank heaters, providing continuous flow of hot water for extended periods at a reduced operating cost. The SIO 18 Pro only runs when hot water is in demand.

In addition, these units are **MAINTENANCE FREE**...no scaling and no annual flush.