**CSI 3-Part Specification for PC50-199**

1. **General**
   1. **Summary**
      1. Related Documents
         1. Drawings and general provisions of the Subcontract apply to this Section.
         2. Review these documents for coordination with additional requirements and information that apply to the work under this section.
      2. Section Includes
         1. Water Heater
   2. **References**
      1. General
         1. The following documents form part of the Specifications to the extent stated. Where differences exist between codes and standards, the one affording the greatest protection shall apply.
         2. Unless otherwise noted, the referenced standard edition is the current one at the time of commencement of the Work.
         3. Refer to Division 01 Section "General Requirements" for the list of applicable regulatory requirements.
   3. **Submittals**
      1. Submit shop drawings/product data sheets for all products specified in Part 2 of this Section.
   4. **Quality Assurance**
      1. All materials shall meet or exceed all applicable referenced standards, federal, Province/State and local requirements, and conform to codes and ordinances of authorities having jurisdiction.
2. **Products**
   1. **Water Heater**
      * 1. Commercial water heater (Natural gas or Propane) water heater(s) shall be A. O. Smith Polaris model PC50-199, minimum 96% thermal efficiency, a storage capacity of 50 gallons (189 Liters), an input rating of 199,000 BTUs per hour, a recovery rating of 253 gallons per hour (gph) at 90°F rise.
        2. Tank constructed of 444 stainless steel with submerged combustion chamber
        3. Advanced electronic control w/ LCD display touchscreen, actual diagnostics, and precise temperature control.
        4. Helical internal heat exchanger.
        5. Modulating gas burner to maintain high efficiency operation.
        6. Hot and cold side taps to allow combination systems.
        7. CSA Certified and ASME rated T&P relief valve
        8. Water heater(s) shall be of power direct vent design, using 2” or 3” plastic pipe. Direct vents up to 130 equivalent feet using ULC S636 PVC or CPVC
        9. Operation of the water heater(s) in a closed system where thermal expansion has not been compensated for (with a properly sized thermal expansion tank) will void the warranty.

Basis of Design:

* + - * 1. A.O. Smith PC50-199

1. **Certifications & Regulatory Compliance**
   1. All models are designed certified by Underwriters Laboratories (UL), Inc., to ANSI Z21.10.3- CSA 4.3 Standards
   2. All models meet the thermal efficiency and standby loss requirements of NRCan and current edition ASHRAE/IES 90.1
   3. Approved for Canada
2. **Execution**
   1. **Demolition**
      1. Refer to demolition requirements specified in Section entitled Demolition and Revision Work.
   2. **Installation**
      1. Installed in accordance with manufacturer’s instructions.

**End of Section**