



Suggested Specifications Dunkirk Electric Hot Water Boiler AT Boiler

1.0 General Requirements:

- 1.1 Provide and Install Boiler(s) in accordance with the plan drawings, written specifications and contract documents.
- 1.2 All work shall be performed in a neat workmanship like manner compliant with all local code authorities.

2.0 Submittal

- 2.1 Product Data: Submit manufacturer's technical product data, including rated capacities of selected model, weight, installation, start-up instructions, and furnished accessory information.
- 2.2 Shop Drawings: Submit manufacturer's assembly drawings indicating dimensions, connection locations, and clearance requirements.
- 2.3 Wiring Diagrams: Submit manufacturer's electrical requirements for the boiler including ladder type wiring diagrams for interlock and control wiring.

3.0 Boiler Requirements

- 3.1 Boiler shall include a one-piece heat exchanger to provide hot water for comfort heating zones and domestic hot water heating at the stated rate.
- 3.2 Boiler shall be a wall hung type boiler.
- 3.3 Boiler shall be factory tested.
- 3.4 Refer to all local codes and jurisdictional requirements for installation of field supplied wiring and anti-scald valve(s).

4.0 Acceptable Manufacturers

- 4.1 Equivalent units and manufacturers must meet all performance criteria for all options and will be considered upon prior approval.

5.0 Certifications & Listings

- 5.1 Boiler shall be certified by CSA in accordance with CSA C22.2 No. 165 and UL-834.
- 5.2 Registered with Massachusetts Board, National Board BPVI.
- 5.3 Boiler shall be constructed in accordance with the American Society of Mechanical Engineers (ASME)
- 5.4 Boiler shall have an ASME H stamp that is applied to the heat exchanger. Each heat exchanger shall be independently reviewed by an ASME authorized inspector. The boiler heat exchanger shall be rated for a maximum allowable working pressure of 30 psig. The boiler shall be equipped with a 30 psig relief valve.

6.0 System Requirements

- 6.1 Central heat hydronic system pressure shall be no more than 30 psig and no less than 7.25 psig.
- 6.2 Domestic hot water hydronic system pressure shall be no more than 30 psig.





7.0 Construction

- 7.1 Boiler heat exchanger shall be constructed of Cast Iron.
- 7.2 Boiler heating element circuit breakers shall be two-pole rated 40 A.
- 7.3 Electric heating elements shall be CSA listed and constructed of an Incoloy sheath.
- 7.4 Electronic control board shall be cULus listed.

8.0 Control System

- 8.1 Control system shall be PCB integral controller with an LCD digital display.
- 8.2 Control will sense supply water temperature and stage additional heating elements on or off to meet the heating demand.
- 8.3 Control will sense and display supply water temperature and indicate when boiler is in central heating or domestic water mode.
- 8.4 Control displays error codes and diagnostic information.

9.0 Electrical Connections

- 9.1 Supply voltage 208/240 Vac, 1 ph, 60 Hz.
- 9.2 Boiler shall have a low voltage terminal strip with clearly marked connections.

10.0 Quality Assurance

- 10.1 Warranty
 - 11.1.1 Boiler shall be supplied with written Manufacturer's Standard Warranty. Warranty is 20 years on Primary heat exchanger, one year on parts.
- 10.2 Factory testing - boiler shall be factory tested.

11.0 Boiler Manuals

- 11.1 The boiler shall be provided with a complete set of instructions as follows:
 - 11.1.1 Installation, Operation and Maintenance Manual (IOM) with Application Guide and repair parts list

