

## **L.E.S. Series VW Specification (Hot Water; ANSI/ASME CSD-1)**

### **General**

The contractor shall furnish and install \_\_\_\_ L.E.S. Model VW- \_\_\_\_-\_\_\_\_-\_\_\_\_ (or equal) packaged steel vertical firetube boiler(s) as shown on plans and described by these specifications for \_\_\_\_ PSI Hot Water Heating.

### **Boiler(s)**

The boiler(s) shall be designed and certified per ASME Heating Boiler Code (Section IV) and bear the ASME stamp. The output rating shall be \_\_\_\_\_ mbh with a minimum of 1.0 sq.ft. fireside heating surface and 0.65 cu.ft. furnace volume per 10 mbh fuel input. The packaged boiler(s) shall be sealed to permit positive combustion chamber pressure with effective turbulators installed in tubes to insure minimum 82% efficiency at rated output firing specified fuel(s) with boiler fluid at 210°F. Maximum boiler dimensions (less burner) shall be \_\_\_\_\_ inches width, \_\_\_\_\_ inches height, \_\_\_\_\_ inches length.

### **Insulation and Jacket**

External surfaces of boiler shell shall be covered with a minimum 1" fiberglass blanket encased in painted steel jacket.

### **Skid**

Boiler shall be welded to a heavy duty skid type base designed so that boiler can be moved using rollers or by lift truck.

### **Boiler Construction and Warranty**

Boiler shall be of all welded construction and shall be designed to minimize stresses due to uneven temperatures of various metal parts during firing. Boiler shall be warranted for five (5) years against tube joint leaks or thermal stress induced damage to boiler tube sheets, furnace, or shell, excluding only failures caused by corrosion, scale accumulation, low water operation, or overfiring.

### **Trim and Controls**

Each boiler shall include ASME labeled relief valve, 3½" Theraltimeter gauge, Honeywell L4006E High Limit and L4006A Operating controls (in wells), McDonnell & Miller PS-851M LWCO (manual reset with test feature), nipples and caps for inspection openings, and a ball type drain/blowdown valve.

### **Secondary Flow**

Where heating plant consists of two or more boilers, factory mounted and wired pump shall be installed so that, at rated boiler output, temperature rise through boiler is less than \_\_\_\_°F. This pump shall be enabled by a relay or contactor energized from remote sequencing control panel or by bypass switch so that pump is interlocked with burner during automatic heating plant operation or continuously enabled during manual bypass or emergency boiler operation.

### **Burner(s)**

Each boiler shall include a factory-mounted forced-draft burner requiring \_\_\_\_\_ volt, \_\_\_\_ ph., \_\_\_\_ cycle electrical power and including an appropriate burner motor relay or starter. Control circuit shall be 115v, 1 ph. with On/Off Control Switch and 6 amp fuse. Burner(s) shall bear UL "A" label, and satisfy requirements of \_\_\_\_\_ and CSD-1. Burner input shall be \_\_\_\_\_ MBH nat. gas and/or \_\_\_\_\_ GPH #2 fuel oil and burner shall be capable of (On-Off/LHO/LHL/Modulating) firing. Flame sensing shall be (Rectification/UV) using \_\_\_\_\_ Flame Safeguard Control and burner console shall include the following signal lights: power on, main fuel on, \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ .