

Hurst Boiler & Welding Company, Inc.

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**SERIES LPE BOILER (20-100 HP, STEAM 15 PSIG; HOT WATER 30 & 60 psig)
SAMPLE SPECIFICATIONS**

The following sample specifications are provided by Hurst Boiler & Welding Co., Inc. to assist you in meeting your customer's specific needs and application. The sample specifications are typically utilized as the base template for the complete boiler specification. Contact your local Hurst Boiler & Welding Co., Inc. authorized representative for information on special insurance requirements, special code requirements, optional equipment, or general assistance in completing the specification.

1.0 – General Boiler Specifications

1.1 - The contractor shall furnish and install Hurst Series LPE Boiler(s) for firing:

- Natural Gas
- LP Gas
- #2 Oil

1.2 - The unit(s) shall be of the three pass modified scotch, steel fire tube type and constructed for:

- 15 psi steam
- 30 psi water
- 60 psi water

1.3 - Boiler, burner and trim shall meet the requirements of Underwriters Laboratories, ASME CSD-1, ASME boiler code, (FM), (IRI), and shall be registered with the National Board of Boiler and Pressure Vessel Inspectors.

1.4 - The unit shall have not less than total square feet of fireside heating surface and shall have a gross output of mbh.

1.5 - Unit(s) shall fit through a standard 36" x 80" doorway opening with trim and controls removed. All specified boiler trim, burner, controls, and fuel train must be factory pre-piped, wired and assembled before shipment. If items are required to be removed for installation, this must be done in the field by the installer.

2.0 – Boiler Design

2.1 - Boiler(s) shall have 2" OD fire tubes with no less than twelve gauge (0.105") thickness. Tubes shall be rolled and flared to tube sheets. Welding of tubes to tube sheets is prohibited.

2.2 - Boiler(s) shell shall be constructed of not less than 5/16" (.3125") thick boilerplate. Tube sheets shall be constructed of not less than 1/2" (.50") thick boiler plate.

2.3 - Twin tube sheets shall be used in the rear turnaround. Boiler shall be supported by a minimum 3" channel iron skids. A 2" Pyrex flame observation port shall be provided at the rear of the boiler. The top and sides shall be water cooled with poured rear door (end only). (Light weight formed insulation material shall not be allowed).

2.4 - Provide flanged, bolt on type front and rear smoke boxes that can readily be removed at job site. Smoke boxes shall be internally insulated with 1/2" thick millboard. Rear smoke box shall be fitted with a stack outlet measuring inches.

- Vertical
- Horizontal

2.5 - A 6" x 6" flanged and bolted clean out shall be provided in rear smoke box. Front smoke box access plate shall be constructed of .25" plate and have handles for easy removal. All bolts and studs shall have brass nuts.

2.6 - Unit(s) shall be provided with minimum 2" thick mineral wool insulation. The boiler shall be lagged with a 22-gauge thick carbon steel jacket. The boiler jacket shall feature a bottom side primer of polyurethane resin base coat of .2 mil. dry finish thickness and a final coat of .4 mil. dry finish thickness of valspar. The top side (exterior) of the jacket shall feature a primer of 3 mil. dry finish thickness and a final coat of .8 mil. dry finish thickness of valspar polyurethane resin based paint. The application of the paint is to be automated roller type and is to be oven dried. The exterior finish of the boiler jacket shall have a limited warranty by the manufacturer for five (5) years from date of manufacture for chalking, fade, peeling, or blistering.

2.7 - Provide at least two lifting eyes on boiler for unloading and lifting.

3.0 – Trim

Trim shall be determined as:

- Water boiler trim shall include a probe type low water cut off with manual reset, relief valve(s), combination pressure gauge and thermometer, operating and manual reset high limit aquastats.
 - Steam boiler trim shall include McDonnell & Miller #157E low water cut off and pump control, probe type auxiliary water cut off with manual reset, water column, water column blowdown, 4.5” steam pressure gauge, operating and manual reset high limit controls.
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4.0 – Burner

The burner shall be forced draft type. Fuel burning equipment shall be factory assembled, mounted and wired, shall bear the Underwriters Laboratory label, and meet the requirements of ASME CSD-1. Equipment shall include blower motor and blower assembly, air inlet shutter, integral motor over load protection, combustion safety control, ignition transformer, and flame sensor. The burner shall provide for automatic on/off operation with 30 seconds pre-purge. Motor voltage to be / / . Furnish a boiler mounted control panel with on/off control switch and lights for power on and main fuel on.

5.0 – ASME Information

Each boiler shall be furnished with ASME manufacturers’ data report and operations and maintenance manual.