

GAS FIRED BOILER – 84%+ AFUE – REPLACEMENT

Equipment Requirements

- Furnish and install a draft induced, intermittent ignition, gas fired boiler AFUE rating to be 84%+ as per manufacturer's installation instructions, state mechanical and plumbing code and per the following specifications:
 - Boiler is to be sized with sufficient BTU output rating to maintain 70°F interior at -20°F exterior temperature as per Manual J.
- The unit is to include high limit control and relay, low water cut-out, back flow prevention device/RPZ (testing included if required), pressure and temperature gauges, a new expansion tank with automatic drain valve and pressure relief valve and piping to within 6" of floor.
- Minimum 20-year heat exchanger warranty on unit
- Remove and proper disposal of existing equipment.
- Install a new programmable thermostat(s).
- An ACCA approved Manual J is required with invoice.
- Minimum service clearance shall be as per manufacturer specifications.
- Minimum clearance to combustibles shall be followed as indicated on the appliance rating plate.

Venting

- Install new 24 gauge flue with proper rise (minimum ¼ in. per ft) to ensure the elimination of waste gas.
- Install vent damper and new draft hood to ensure heat retention.
- Horizontal flue connectors shall not exceed 75% of the height of the vertical chimney.
- All flue joints should overlap 1 1/4" and be fastened with at least 3 screws and be securely anchored to boiler.
- In masonry chimneys, install a metal thimble to line the flue passage through the chimney wall, sealing around the chimney wall and thimble with mortar.
- Minimum clearance to combustibles shall be followed as per state mechanical code.

Gas Line

- Furnish and install new approved gas line as per the state mechanical code.
- Determine gas supply by the length of run from the meter and must avoid pressure drop inconsistent with the furnace burner design.
- Install a new manual in-line gas approved shut-off valve on the supply side of the union, a ground joint type union, and a gas drip tee leg.

NOTE: If ward flex or Gastite gas line will remain, it must be bonded by a licensed Electrician as per manufacturer's instructions and per state code.

Distribution System

- The new boiler to be placed on raised platform or blocks.
- Furnish and install isolation valves (ball valves) above and below new circulation pump(s).
- Install siliconized water additive as per the manufacturer's specifications.
- The boiler is to be installed with existing zone(s).
- Ensure zone valves are in good working order, repair or replace as needed to provide proper heat distribution.
- Connect the boiler to the existing distribution system.
- Supplies running through unheated areas (crawl spaces, attics, etc.) insulated with minimum R3 closed cell foam pipe wrap. Radiation is to provide steady balanced heating.

Electrical

- Wiring of the boiler by a licensed Electrician to be included as part of this contract.

Homeowner info/Education

- Leave all manuals, warranties, and instructions on equipment operation.
- Prominently display the installer's contact information on new unit.
- Educate household on proper operation and maintenance of system.
- Educate household on proper use and programming of thermostat(s).

Work shall be performed in accordance with the Standard Work Specifications developed by the National Renewable Energy Laboratory for the Weatherization Assistance Program along with state, local and municipal codes. These standards can be referenced at <https://sws.nrel.gov/>.