



# CGi SERIES BOILER SUGGESTED SPECIFICATIONS

## I. General Requirements

- A. Furnish and install ( ) low pressure packaged cast iron sectional boiler(s) that operate under induced draft.
- B. Install boiler-burner unit(s) in compliance with manufacturers installation instructions. All work must be done in a neat and workman like manner.
- C. Weil-McLain qty.( ) CGi ( ) PIDN, or ( ) PIL boiler(s) capable of burning natural gas at 5 to 13"w.c. or propane 11 to 13"w.c. inlet pressure.
  - 1. Packaged boiler (standard).
  - 2. Natural or propane gas fired.
  - 3. Water.
  - 4. Minimum 82% efficiency.
  - 5. Induced draft.
- D. Boiler(s) shall have I=B=R Hydronics Institute gross output(s) at 100% firing rate – ( ) MBH per boiler.
- E. Boiler(s) shall be manufactured by ISO 9001 registered company to conform to Section IV of the ASME Boiler and Pressure Vessel Code.
  - 1. Individual sections (and section assembly) to be hydrostatically pressure tested at factory in accordance with ASME requirements.
  - 2. Maximum allowable working pressure 50 PSIG water and cast as part of section with ASME symbol.
- F. Regulatory Requirements
  - 1. Boiler(s) and controls to comply with applicable regulations.
- G. Submittals
  - 1. Submit shop drawings and product data.
  - 2. Submittal packet to include boiler (and burner) manufacturer descriptive literature, installation instructions, operating instructions, and maintenance instructions.

## II. Product

- A. Acceptable boiler/burner manufacturer(s) include(s):
  - 1. Weil-McLain only, as specified in Part 1, Paragraph C.

- a) Other manufacturer(s) or other Weil-McLain boiler(s) must comply with specifying engineer's requirements, including: Full intent of these specifications, and provide complete submittal including literature, wiring diagrams, fuel piping diagrams, and a list of similar installations.
- b) Submittal to be presented to specifying engineer at least seven working days for \_\_\_\_\_ approval before bid opening. Substitutions are not permitted after contract is awarded.
- c) Energy Management Control System(s) must be tested and approved for installation with specified boiler by boiler manufacturer.

B. Boiler construction

1. Boiler sections

- a) Assembled with tie rods.
- b) Parallel ground sealed with high temperature silicone sealant to assure permanent gas-tight seal.
- c) Sealed water-tight by elastomer sealing rings, not cast iron nipples. Each port opening is machined to accept elastomer sealing rings between sections.
- d) Provided with sufficient tappings to install required controls.

2. Boiler(s)

- a) Provided with cast-in air elimination to separate air from circulating water.
- b) Provided with expansion tank tapping to divert separated air to expansion tank.
- c) Constructed to provide balanced water flow through entire section assembly using single supply and return connections for water. No external headers are necessary.
- d) Designed with a low silhouette to provide maximum headroom.
- e) Elastomer sealing rings are to be used to provide permanent water-tight seal between sections. Unlike cast iron or steel push nipples, the elasticity of the seals fills any gaps caused by misalignment or expansion or contraction.
- f) Constructed with high-grade stainless steel burner tubes.
- g) Shipped with insulated heavy gauge steel jacket(s) with durable powdered paint enamel finish. Jacket shall have two piece top panel for easier servicing.

C. Boiler foundation(s):

Installer to construct needed support and level concrete foundation(s) where boiler room floor is uneven or will not support the weight of the boiler(s).

D. Boiler trim:

- 1. All electrical components to be of high quality and bear the U.L. label.
  - a) Water boiler(s) controls furnished:
    - 1) High temperature limit setting to be 140 – 240 degrees.

- 2) Combination pressure-temperature gauge with dial clearly marked and easy to read, installed with well for removal without draining the boiler.
- 3) ASME certified pressure relief valve, set to relieve at 30 PSIG. Optional relief valves available up to and including maximum allowable pressure. Side outlet discharge type; contractor to pipe outlet to floor drain or near floor, avoiding any area where freezing could occur.
- 4) Integrated spark module for blower control with indicator lights for easy troubleshooting.

E. Boiler Manuals:

1. Boiler, gas control and user's information manual.
2. Venting supplements and instructions.



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