



# CGa SERIES BOILER SUGGESTED SPECIFICATIONS

## I. General Requirements

- A. Furnish and install ( ) low pressure packaged cast iron sectional boiler(s) that operate under natural 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.( ) CG ( ) PIDN, ( )SPDN or ( ) SPDL 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 81% efficiency.
  - 5. Natural 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.
  - 2. Other manufacturer(s) or other Weil-McLain boiler(s) must comply with specifying engineer's requirements, including:

- a) 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.
- C. Boiler(s)
- 1 Provided with cast-in air elimination to separate air from circulating water.
  - 2 Provided with expansion tank tapping to divert separated air to expansion tank.
  - 3 Constructed to provide balanced water flow through entire section assembly using single supply and return connections for water. No external headers are necessary.
  - 4 Designed with a low silhouette to provide maximum headroom.
  - 5 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.
  - 6 Constructed with stainless steel burner tubes.
  - 7 Shipped with insulated heavy gauge steel jacket(s) with durable powdered paint enamel finish. Jacket shall have two piece top panel for easier servicing.
- D. 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).
- E. Boiler trim:
- 1. All electrical components to be of high quality and bear the UL 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 vent damper control, with indicator lights for easy troubleshooting (PI models only).

D. Boiler Manuals:

1. Boiler manual.
2. Gas control supplement
3. User's information manual.



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