SUGGESTED SPECIFICATIONS

PEERLESS BOILERS
9th & ROTHERMEL DRIVE • PO BOX 447 • NEW BERLINVILLE, PA 19545-0477
PHONE: 610-367-2153

Series 62 Atmospheric Gas-Fired Boilers

I. GENERAL REQUIREMENTS

A. The boiler(s) shall be of a low pressure, cast iron, atmospheric gas design and shall be tested and design certified to the current ANSI Z21.13 standard and listed in the International Approval Services Directory of A.G.A. and CGA Certified Appliances and Accessories.

B. The boiler(s) shall be capable of developing full A.G.A. listed gross output at 100 percent firing rate and shall include the A.G.A Certification Seal for Appliances.

C. The boiler(s) shall be listed in the I=B=R Ratings Directory and shall bear the I=B=R Emblem.

D. The boiler(s) shall be Peerless Model _____ for (natural) (LP) gas with an A.G.A. Gross Output of _____ MBH and a Net I=B=R (Water) (Steam) Rating of _____ MBH.

E. The boiler(s) shall be constructed in accordance with the provisions of Section IV of the ASME Boiler and Pressure Vessel Code and shall be stamped with the required ASME symbol. Each boiler section shall be hydrostatically pressure tested for a maximum allowable working pressure of 50 PSIG for water and 15 PSIG for steam.

F. The boiler(s) shall be field assembled and hydrostatically tested in accordance with the manufacturer's installation instructions. All work shall be completed in a neat and workmanlike manner.

G. *Optional Factory Packaged Boilers:*

The boiler(s) shall be completely factory packaged with jacket, burners, trim and controls mounted and wired. The boiler sections shall be assembled with steel push nipples and high temperature sealing rope shall be used to provide a permanent gas-tight seal between the sections. The boiler(s) shall be hydrostatically tested in accordance with Section IV of the ASME Boiler and Pressure Vessel Code for a maximum allowable working pressure of 50 PSIG for hot water and 15 PSIG for steam. The boiler(s) shall be fire-tested (*optional*) for a functional check of all components prior to shipment.

II. BOILER CONSTRUCTION FEATURES

A. The boiler(s) shall have a factory assembled split block of sections for ease of handling.

B. The boiler sections shall be assembled with steel push nipples to provide a permanent water-tight seal between the sections.

C. Each section shall be evenly spaced with spacing pads and high temperature sealing rope shall be used to provide a permanent gas-tight seal between the sections.

D. The boiler(s) shall be furnished with a cast iron cleanout plate located on the left end section for ease of inspection and cleaning of the flueways. The cleanout plate shall be sealed to the boiler with high temperature sealing rope.

E. The boiler(s) shall be furnished with a corrosion resistant aluminized steel flue collector and horizontal-to-vertical draft hoods. The flue collector shall be sealed to the top of the boiler sections with high temperature sealing rope.

F. The boiler(s) shall be provided with aluminized steel main burners of a one piece slotted port design. The burners shall be designed to provide quiet ignition and extinction.

G. The boiler(s) shall be provided with an insulated steel deluxe jacket with a painted finish.

SS62 R1 (8/03-2M)
Printed in U.S.A.

III. BOILER FOUNDATION

A. A concrete housekeeping pad shall be provided as recommended by the boiler manufacturer if the boiler room floor is not level or if additional structural support is needed.

IV. TANKLESS WATER HEATERS (Optional for water boilers)

A. The boiler(s) shall be provided with an internal tankless water heater rated at _____GPM at a 40° F to 140° F temperature rise.

B. The boiler(s) shall be provided with a low limit temperature control set to maintain a 200° F boiler water temperature.

V. BOILER TRIM AND CONTROLS

For Water Boilers:

A. The boiler(s) shall be provided with a safety relief valve set to relieve at (30) (50) PSIG. The valve shall conform to Section IV of the ASME Boiler and Pressure Vessel Code.

B. The boiler(s) shall be provided with a combination pressure-temperature gauge to indicate boiler pressure and temperature.

C. The boiler(s) shall be provided with an operating temperature control and a manual reset high limit temperature control.

D. The boiler(s) shall be provided with a (float type) (probe type) low water cut-off.

For Steam Boilers:

A. The boiler(s) shall be provided with a safety valve set to relieve at 15 PSIG. The valve shall conform to Section IV of the ASME Boiler and Pressure Vessel Code.

B. The boiler(s) shall be provided with a compound steam gauge to indicate boiler pressure.

C. The boiler(s) shall be provided with a water gauge glass and gauge cocks.

D. The boiler(s) shall be provided with an operating pressure control and a manual reset high limit pressure control.

E. The boiler(s) shall be provided with a (float type) (probe type) low water cut-off.

VI. STANDARD GAS CONTROL TRAIN

A. The gas control train shall be factory assembled and shall include a manual shut-off gas valve, gas pressure regulator and two (2) diaphragm gas valves.

B. Inlet gas pressure to the gas train under full flow conditions shall be a minimum of 5.0″ W.C. and a maximum of 14.0″ W.C. for natural gas, and a minimum of 11.0″ W.C. and a maximum of 14.0″ W.C. for LP gas.

C. If the inlet gas pressure exceeds 14.0″ W.C., a lock-up type gas pressure regulator shall be installed in the main gas supply to the boiler(s) to provide a maximum lock-up gas pressure of 14.0″ W.C.

VII. COMBUSTION CONTROLS FOR NATURAL GAS

62-09 thru 11: (Natural gas)

Standard controls:

A. The boiler(s) shall be provided with two constant burning thermally supervised safety pilots with 100% shut-off.

Optional controls (in lieu of standard): [Specify as required]

A. The boiler(s) shall be provided with an HSP-1 Ignition System, which shall include one (1) Honeywell S8610 electronic spark ignition module, one (1) intermittent burning electronically supervised safety pilot and one (1) constant burning thermally supervised safety pilot with 100% shut-off.

VII. COMBUSTION CONTROLS FOR NATURAL GAS, CONT'D

62-12 thru 15: (Natural gas)

Standard controls:

A. The boiler(s) shall be provided with an HSP-1 Ignition System, which shall include one (1) Honeywell S8610 electronic spark ignition module, one (1) intermittent burning electronically supervised safety pilot and one (1) constant burning thermally supervised safety pilot with 100% shut-off.

Optional controls (in lieu of standard): [Specify as required]

A. The boiler(s) shall be provided with an HSP-2 Ignition System, which shall include two (2) Honeywell S8610 electronic spark ignition modules and two (2) intermittent burning electronically supervised safety pilots with 100% shut-off.

or

A. The boiler(s) shall be provided with an E1-M* Ignition System, which shall include one (1) Honeywell RM7890C Flame Safeguard Control, one (1) constant burning electronically supervised safety pilot and one (1) constant burning thermally supervised safety pilot with 100% shut-off. *(Add suffix "P" for ignition system with prewired control panel and specify Paragraph "B" below.)

or

A. The boiler(s) shall be provided with an E1-E* Ignition System, which shall include one (1) Honeywell RM7890A Flame Safeguard Control, one (1) intermittent burning electronically supervised safety pilot and one (1) constant burning thermally supervised safety pilot with 100% shut-off. *(Add suffix "P" for ignition system with prewired control panel and specify Paragraph "B" below.)

or

A. The boiler(s) shall be provided with an E2-M* Ignition System, which shall include two (2) Honeywell RM7890C Flame Safeguard Controls and two (2) constant burning electronically supervised safety pilots with 100% shut-off. *(Add suffix "P" for ignition system with prewired control panel and specify Paragraph "B" below.)

or

A. The boiler(s) shall be provided with an E2-E* Ignition System, which shall include two (2) Honeywell RM7890A Flame Safeguard Controls and two (2) intermittent burning electronically supervised safety pilots with 100% shut-off. *(Add suffix "P" for ignition system with prewired control panel and specify Paragraph "B" below.)

Specify following if prewired control panel is required:

B. Furnish a prewired MSP Electronic Control Panel, which shall be constructed of heavy gauge metal with a baked enamel finish and have a gasketed door for dust resistance. The panel shall include color-coded wiring, RM7890 Flame Safeguard with alarm contacts, Q7800A subbase and numbered terminal strip for ease of field wiring. Also included shall be a 10 ampere fuse, switches for "Power", "Pilot" and "Main Valve", and signal lamps for "Power On" (Clear), "Pilot On" (Amber), "Main Valve On" (Green) and "Flame Failure" (Red).

VIII. COMBUSTION CONTROLS FOR LP GAS

62-09 thru 11: (LP gas)

Standard controls:

A. The boiler(s) shall be provided with two (2) constant burning thermally supervised safety pilots with 100% shut-off.

Optional controls (In lieu of standard): [Specify as required]

A. The boiler(s) shall be provided with an E1-M* Ignition System, which shall include one (1) Honeywell RM7890C Flame Safeguard Control, one (1) constant burning electronically supervised safety pilot and one (1) constant burning thermally supervised safety pilot with 100% shut-off. *(Add suffix "P" for ignition system with prewired control panel and specify Paragraph "B" below.)

Specify following if prewired control panel is required:

B. Furnish a prewired MSP Electronic Control Panel, which shall be constructed of heavy gauge metal with a baked enamel finish and have a gasketed door for dust resistance. The panel shall include color-coded wiring, RM7890 Flame Safeguard with alarm contacts, Q7800A subbase and numbered terminal strip for ease of field wiring. Also included shall be a 10 ampere fuse, switches for "Power", "Pilot" and "Main Valve", and signal lamps for "Power On" (Clear), "Pilot On" (Amber), "Main Valve On" (Green) and "Flame Failure" (Red).

VIII. COMBUSTION CONTROLS FOR LP GAS, CONT'D

62-12 thru 15: (LP gas)

Standard controls:

A. The boiler(s) shall be provided with an E1-M* Ignition System, which shall include one (1) Honeywell RM7890C Flame Safeguard Control, one (1) constant burning electronically supervised safety pilot and one (1) constant burning thermally supervised safety pilot with100% shut-off. *(Add suffix "P" for ignition system with pre-wired control panel and specify Paragraph "B" below.)

Specify following if prewired control panel is required:

B. Furnish a prewired MSP Electronic Control Panel, which shall be constructed of heavy gauge metal with a baked enamel finish and have a gasketed door for dust resistance. The panel shall include color-coded wiring, RM7890 Flame Safeguard with alarm contacts, Q7800A subbase and numbered terminal strip for ease of field wiring. Also included shall be a 10 ampere fuse, switches for "Power", "Pilot" and "Main Valve", and signal lamps for "Power On" (Clear), "Pilot On" (Amber), "Main Valve On" (Green) and "Flame Failure" (Red).

Optional controls (In lieu of standard): [Specify as required]

A. The boiler(s) shall be provided with an E2-M* Ignition System, which shall include two (2) Honeywell RM7890C Flame Safeguard Controls and two (2) constant burning electronically supervised safety pilots with 100% shut-off. *(Add suffix "P" for ignition system with prewired control panel and specify Paragraph "B" below.)

Specify following if prewired control panel is required:

B. Furnish a prewired MSP Electronic Control Panel, which shall be constructed of heavy gauge metal with a baked enamel finish and have a gasketed door for dust resistance. The panel shall include color-coded wiring, RM7890 Flame Safeguards with alarm contacts, Q7800A subbases and numbered terminal strip for ease of field wiring. Also included shall be a 10 ampere fuse, switches for "Power", "Pilot" and "Main Valve", and signal lamps for "Power On" (Clear), "Pilot On" (Amber), "Main Valve On" (Green) and "Flame Failure" (Red).

IX. OPTIONAL BOILER CONTROLS: (Specify as required)

62-09 thru 15: (Natural gas only)

A. The boiler(s) shall be provided with an MFSC Modulating Firing System to modulate boiler input at 50% or 100% according to changes in the heating load requirements. The system shall maintain a fixed (water temperature) (steam pressure) using (temperature controllers) (pressure controllers) located in the main system supply header.

62-12 thru 15: (Natural gas only)

A. The boiler(s) shall be furnished with a Mod-U-Pak Modulating Firing System to modulate boiler input at 50%, 75%, or 100% based on changes in the heating load requirements. (*Specify required control set*)

1. Control set #1, for hot water boilers, provides a fixed system water temperature using temperature controllers located in the main system supply header. Boiler input will modulate at 50%, 75%, or 100% to maintain the system water temperature set point. A modulation by-pass switch shall be provided for testing purposes.
2. Control set #2, for hot water boilers, provides a variable system water temperature using an indoor-outdoor reset control. Boiler input will modulate at 50%, 75%, or 100%, based on outside air temperature, to maintain the system reset water temperature. A modulation by-pass switch shall be provided for testing purposes.
3. Control set #3, for steam boilers, provides a fixed system steam pressure using pressure controllers located in the main system supply header. Boiler input will modulate at 50%, 75%, or 100% to maintain the system pressure set point. A modulation by-pass switch shall be provided for testing purposes.

B. The boiler control system shall comply with the requirements of_____

_____

_____

Specify the name of any code(s) to be complied with (FM, IRI, CSD-1, etc.). Refer to current Trade Price List for availability of optional controls.