

## General Engineering Specifications



Contractor shall furnish and install, where indicated on the drawings, \_\_\_\_ PC11530 PurePro Trio hot water boiler(s), pressure fired boiler burner units suitable for forced draft firing with #2 fuel oil, natural gas or propane gas.

Boilers shall be constructed of GG20 high silicon cast iron. They shall be of pressurized wet base sectional construction utilizing precision machined push nipples pressed into a machined nipple port in the section eliminating the need for any gasket material which would be subject to deterioration due to corrosion or oil based chemicals.

Sections shall be manufactured and tested in accordance with ASME Section IV requirements for low pressure boilers. Each cast section shall be permanently marked with the ASME symbol and the maximum allowable working pressure of 58 PSI.

The boiler burner unit shall be a three pass wet base construction suitable for forced draft firing. The boiler burner unit shall be constructed so that only a vent shall be required that extends three feet above the highest point of the roof. The boiler flue connection shall be of cast iron construction for long life.

The boiler shall be furnished as fully assembled casting or as a knocked down unit for field erection according to manufacturer's instructions.

The boiler burner unit is designed to eliminate the need for refractory material or a combustion chamber target wall.

Access to the boiler firesides for inspection shall be from the front clean out door and the burner swing door. The burner swing door shall be lined with light weight refractory insulation and shall be equipped with observation/test port. The burner swing out door to be field adjustable to allow for left or right hand hinging. The seal between the door and the boiler casting shall be permanent gasket for repeated positive sealing.

The boiler jacket shall be constructed of heavy gauge steel with 3" insulation and have a rust resistant powder coated finish. The jacket shall be capable of being installed after system piping has been connected to the boiler. Jacket is to have a removable front door to allow complete access to burner swing door and cleanout door. The boiler jacket shall be capable of being installed after the system piping has been connected to the boiler assembly.



## Boiler Approval Number

Massachusetts Approval	C1-0916-70
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# PC11530 TRIO Commercial Cast Iron Boiler

Engineering  
Submittal  
Sheet

## Boiler Controls

Operating control - Hydrolevel HydroStat Fuel Smart 3250+. Thermal targeting bases boiler temperature on demand or outdoor reset with optional outdoor sensor. Indicating lights.

Auxiliary High Limit Control - Honeywell L4006E manual reset.

Low Water Cut-Off - Manual reset included as part of Hydrolevel Hydrostat.

Temperature-Pressure Gauge - Round 3-1/2" visible through the jacket door.

Relief Valve - ASME rated relief valve sized to exceed the boiler gross output and shall be factory set to relieve pressure at 30 PSI. 50 PSI Optional.

## Fuel Burning Equipment

The burners shall incorporate all necessary devices and controls to make a complete fuel burning system for the type of fuel specified, and shall bear the listing label of Underwriters Laboratories, Inc.

The oil burner shall be a model F20 as manufactured by Riello Burners North America. The burner shall be designed for No. 2 fuel oil and shall be of the forced draft pressure atomizing type. The oil burner shall be furnished complete with integral motor driven blower, oil pump, oil nozzle, oil solenoid valves, direct spark ignition assembly and primary control which utilizes a cadmium sulfide flame detector.

The gas burner shall be model G900 as manufactured by Riello Burners North America, model 301 as manufactured by Carlin Combustion, or CG 10.4 as manufactured by R.W. Beckett. The burner shall be of the forced draft suitable for burning natural or LP gas. The gas burner shall be furnished with an integral motor driven blower, combustion safeguard control with pre-purge, air flow switch, complete gas train including pressure regulator. Minimum inlet gas pressure 6". Maximum gas inlet gas pressure 14"

## Electrical Supply

Electrical supply to the boilers will be 120 Volts, 60Hz, 1 phase.

## Clearances to Combustibles

Top - 24 IN.  
Front - 24 IN.  
Flue Connector Single Wall Vent Piping - 18 IN.  
Rear - 6 IN.  
Sides - 6 IN.

## Boiler Performance Data

Number of Sections	11
Oil Input	5.30 GPH
Gas Input	742,000 Btu/Hr
Gross Output Oil	649,000 Btu/Hr
Gross Output Gas	631,400 Btu/Hr
Net Output Oil	564,000 Btu/Hr
Net Output Gas	548,000 Btu/Hr
Net Rating Sq. FT	3760

## General Data

Maximum Allowable Working Pressure	58 PSI
Water Content	32 Gallons
Standard Relief Valve Setting	30 PSI
Standard Relief Valve Size	3/4" x 1"
Standard Relief Valve Capacity	970,000
Bare Block Weight	1410 Lbs
Front Section Weight	145 Lbs
Rear Section Weight	150 Lbs
Intermediate Section Weight	110 Lbs
Shipping Weight (Approx.)	1785 Lbs
Operating Weight (Approx.)	1947 Lbs

## Dimensional Data

Length With Jacket	61-1/8"
Width With Jacket	25-3/8"
Height With Jacket	41-1/8"
Length Bare Block with Flue and Burner Door	58"
Width Bare Block	19"
Height Bare Block	37"

