



Dunkirk Boilers CH-80, 100, 120, 150, 180 Submittal



Engineer: _____

Project Name: _____

Project Location: _____

Contractor: _____



APPLICATION:

Modulating Gas fired water boiler for indoor installation. Approved for closet or alcove installations. For use with natural or liquefied petroleum (LP/Propane) fuel gases. Wall mounted – optional floor stand available. All boilers are factory assembled with controls and wiring and test fired to ensure dependable performance. Boiler shall be certified for Category IV and Direct Vent applications only.

CERTIFICATION AND APPROVALS:

Stainless Steel heat exchanger is manufactured and tested in accordance with American Society of Mechanical Engineers (ASME) and certified by Lab Test Certification (LC), AHRI, NRCAN. Registered with National Board BPVI, and Massachusetts Board. Stainless steel heat exchanger is tested for maximum allowable working pressure of 50 psig in accordance with ASME boiler and pressure vessel code, section IV, rules for construction of heating boilers. A 30 psig safety relief valve is shipped standard.

BOILERS INCLUDE:

- Wall mount bracket, mounting hardware.
- Boiler includes factory installed and wired circulator pump.
- Factory provided built-in Low Water Cutoff via Pressure Switch.
- Digital Boiler Control:
 - ▶ Control system is PCB integral controller with LCD digital/graphical display.
 - ▶ Control can sense and display water temperature and indicate when boiler is in central heating or domestic water mode.
 - ▶ Control can accept an optional Outdoor Air sensor and has field adjustable reset curves.
 - ▶ Control displays Error Codes and Diagnostic information.
 - ▶ Control can accept 0-10V input to manage heating set-point or heating power level.



➤ Boiler Combustion System:

- ▶ The Gas valve is a modulating valve capable of firing from:
 - CH-80; 8-80 MBH; 10:1 Turndown
 - CH-100; 10-100 MBH; 10:1 Turndown
 - CH-120; 12-120 MBH; 10:1 Turndown
 - CH-150; 15-150 MBH; 10:1 Turndown
 - CH-180; 18-180 MBH; 10:1 Turndown
- ▶ Induced draft blower is variable speed controlled by the PCB.
- ▶ Burner is constructed of Iron-Chromium stainless steel.
- ▶ Ignition system shall incorporate a Direct Spark Igniter and a separate Flame Sensing rod.

➤ Heat Exchanger:

- ▶ Boiler's primary heat exchanger is constructed of Iron-Chromium stainless steel.

➤ Electrical

- ▶ 120 volts AC, 60 Hertz, 1-phase; less than 15 amps.
- ▶ Factory wired 3-foot appliance cord with male plug end.
- ▶ Low voltage terminal strip for Thermostat, Outdoor Air Sensor, Indirect Tank sensor.

➤ Warranty

- ▶ Factory Standard Warranty is 10 years limited warranty on heat exchanger, five years limited warranty on parts for residential applications. Commercial applications is an 8 year limited warranty on heat exchanger, three years limited warranty on parts.

➤ Optional Equipment

- ▶ Outdoor Air Sensor Kit
- ▶ Indirect Tank Sensor Kit
- ▶ Coaxial and Two-pipe venting components



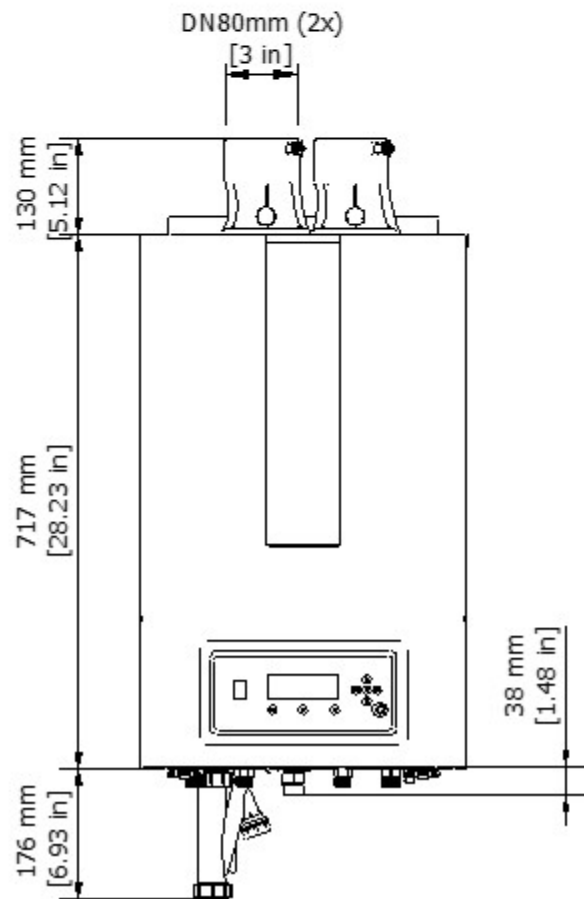
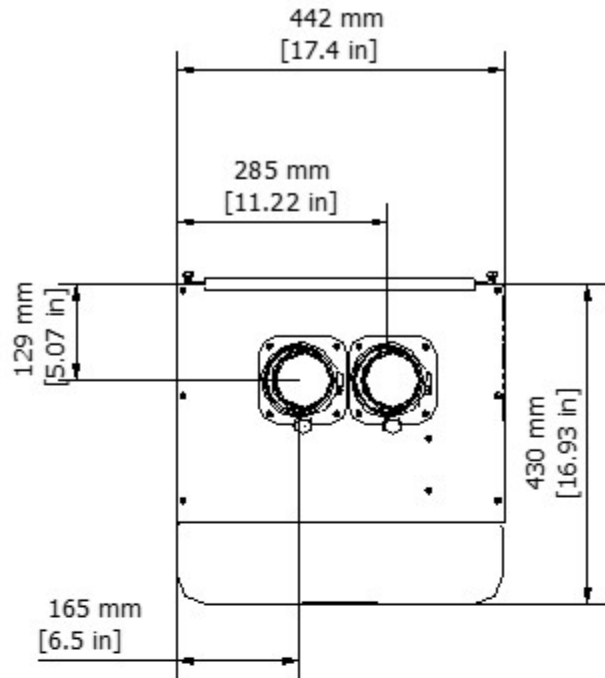
Size	Input Rate (MBH) 0-2000 ft	Heating Capacity (MBH) 0-2000 ft	Net AHRI Rating, Water (MBH) 0-2000 ft	AFUE (%)
CH-80	80	74	64	95.2%
CH-100	100	92	80	95.2%
CH-120	120	110	96	95.2%
CH-150	150	139	121	95.2%
CH-180	180	165	143	95.2%

Minimum Clearances for Servicing

Top	6.00 in / 152.40 mm
Bottom	12.00 in / 304.80 mm
Sides	1.00 in / 25.40 mm
Front	12.00 in / 304.80 mm
Flue Terminal Size 2-Pipe Flue System	3.00 in / 76.20 mm

Central Heating (Sealed System)

Max System Pressure	43.50 psi / 3.00 bar
Min System Pressure	11.60 psi / 0.80 bar
Max System Temperature	194°F / 90°C
Pressure Relief Valve Setting	30.00 psi / 2.11 bar
Flow Connection	3/4" / 19.05 mm
Return Connection	3/4" / 19.05 mm
Relief Valve Connection	3/4" / 19.05 mm
Recommended Operating System Pressure	21.7 psi / 1.5 bar





Maximum Exhaust Length / Maximum Combustion Air Intake Length					
Size	CH-80	CH-100	CH-120	CH-150	CH-180
2" PP	50 / 50	40 / 40	30 / 30	20 / 20	20 / 20
2" (C)PVC	35 / 35	20 / 20	10 / 10	-	-
3"	150 / 150	150 / 150	150 / 150	100 / 100	100 / 100

Maximum Concentric Length					
Size	CH-80	CH-100	CH-120	CH-150	CH-180
2" / 4"	50	30	-	-	-
3" / 5"	150	130	100	80	60
3" / 6"	150	150	150	130	100