Utica Boilers CO-90, 150, 200 Submittal

Engineer:_____

Project Name:_____

Project Location:_____

Contractor:_____

APPLICATION:
Modulating Gas fired Combi 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 is equipped with internal stainless steel brazed plate heat exchanger for potable hot water and automatic 3 way diverting valve to allow Domestic Hot Water Priority operation.
- 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 senses supply water temperature and adjusts the boiler firing rate to deliver the amount of heat needed.
  - Control can sense and display supply water temperature and indicate when boiler is in central heating or domestic water mode.
  - Control has selectable DHW preheat mode. Preheat mode will maintain brazed plate heat exchanger temperature to speed DHW delivery.
  - Control can accept an optional proprietary Outdoor Air sensor and has field adjustable reset curves.
  - Control displays Error Codes and Diagnostic information.

Manufactured by:
ECR International Inc.
2260 Dwyer Avenue, Utica, NY 13501
Tel. 800 325 5479
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- 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:
    - CO-90
      - 9-80 MBH; 8:8:1 Turndown in Central Heat Mode
      - 9-90 MBH; 10:1 Turndown in DHW Mode
    - CO-150
      - 15-120 MBH; 8:1 Turndown in Central Heat Mode
      - 115-150 MBH; 10:1 Turndown in DHW Mode
    - CO-200
      - 20-180 MBH; 9:1 Turndown in Central Heat Mode
      - 20-200 MBH; 10:1 Turndown in DHW Mode
  - 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.
  - DHW brazed plate is constructed of Stainless Steel.

- Electrical
  - 120 volts AC, 60 Hertz, 1-phase; less than 12 amps (15 amp circuit manufacturer recommended).
  - Factory wired 3-foot appliance cord with male plug end.
  - Low voltage terminal strip for Thermostat, and Outdoor Air Sensor.

- Other:
  - Field supplied Anti-Scald valve is required for Domestic Hot Water Supply.

- 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
  - Coaxial and Two-pipe venting components

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Clearances		Combustible Materials (Required) [1]		Service [1][2]	
[1] Required distances measured from boiler jacket. [2] Service, proper operation clearance recommendation. *Allowance for piping at bottom of boiler not included.	**Top**	5″	127 mm	6″	152.4 mm
	Sides	1″	25.4 mm	1″	25.4 mm
	Front	1″	25.4 mm	12″	304.8 mm
	Back	0″	0 mm	0″	0 mm
	Bottom	12″	304.8 mm	12″	304.8 mm
	Vent Pipe	1″	25.4 mm	6″	155 mm

205 Physical Data & Specifications					
Central Heat Supply & Return		3/4″ NPT - Male			
DHW (Cold Water) Inlet & Outlet		3/4″ NPT - Male			
Gas Connection		3/4″ NPT - Female			
DHW Maximum Flow Rate		CO-90		2.3 GPM	
		CO-150		3.4 GPM	
		CO-200		4.6 GPM	
Dimensions / Weights		″Width″	″Height″	″Depth″	″Weight″
	CO-90	17.4″	28.2″	16.9″	77 lbs.
	CO-150	17.4″	28.2″	16.9″	86 lbs.
	CO-200	17.4″	28.2″	16.9″	101 lbs.
Electrical	120 Volts AC, 60 Hertz, Single Phase, less than 12 amps (15 amp circuit recommended)				

Size	Input Rate (MBH) 0-2000 ft	Heating Capacity (MBH) 0-2000 ft	Net AHRI Rating, Water (MBH) 0-200 0ft	AFUE (%)
CO-90	80	74	64	95.2%
CO-150	120	110	96	95.2%
CO-200	180	167	145	95.2%

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CO-90, CO-150, CO-200	
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” NPT
Return Connection	3/4” NPT
Relief Valve Connection	3/4” NPT
Recommended Operational System Pressure	21.7 psi / 1.5 bar

CO-90, CO-150, CO-200	
Domestic Hot Water (Sealed System)	
Max Inlet Pressure	116.00 psi / 8 bar
Min Inlet Pressure	14.5 psi / 1.0 bar
Min DHW Flow Rate	0.05 gpm / 0.18 l/min
Cold Water Inlet Connection	1/2” NPT
DHW Outlet Connection	1/2” NPT
Max DHW Temperature	176°F/80°C
DHW Water Content	0.10 gal/ 0.37 L

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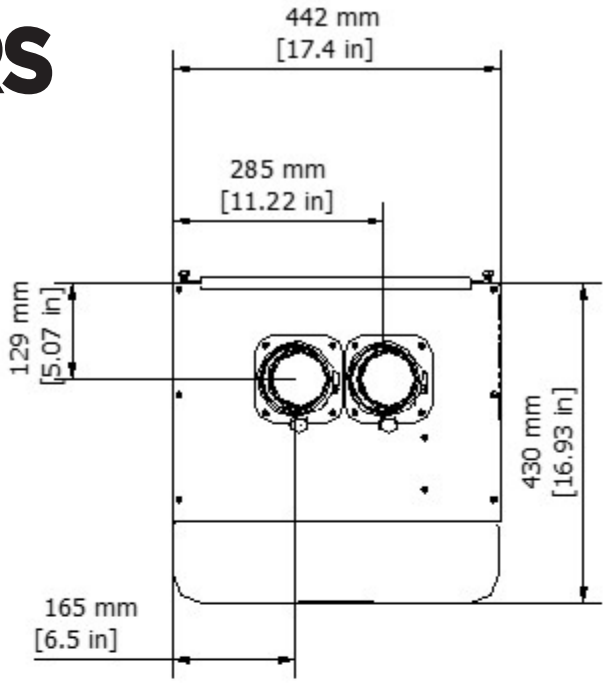

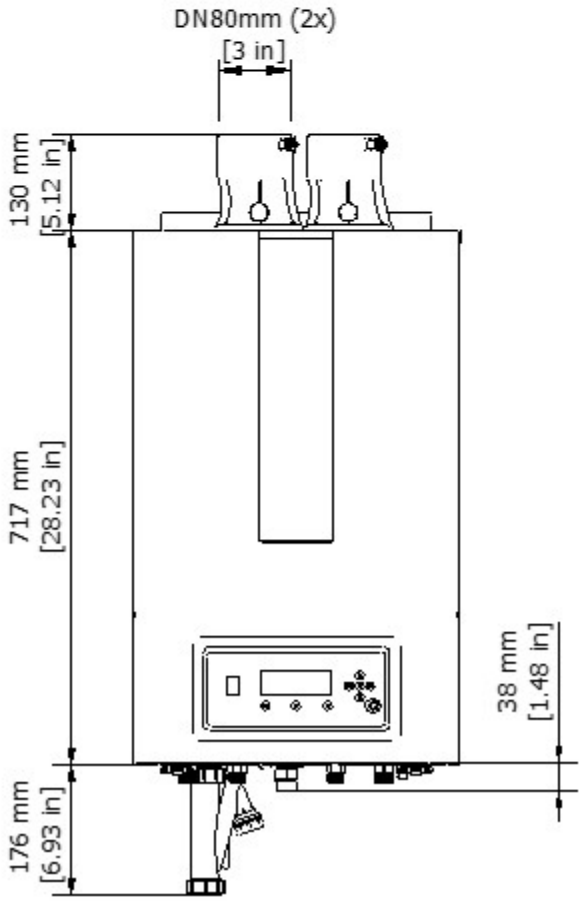

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Maximum Exhaust Length / Maximum Combustion Air Intake Length			
	CO-90	CO-150	CO-200
2″ PP	50 / 50	20 / 20	20 / 20
2″ (C)PVC	40 / 40	10 / 10	-
3″	150 / 150	100 / 100	100 / 100

Maximum Concentric Length			
	CO-90	CO-150	CO-200
2″ / 4″	50	-	-
3″ / 5″	150	100	60
3″ / 6″	150	150	100