



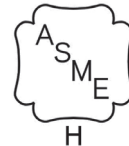
## Dunkirk - DCC-115 - Submittal

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 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 Canadian Standards Association (CSA), 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 and actual size Wall Mount Template
- 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 2 speed circulator pump.
- Factory provided primary / secondary **Labor Savor™** manifold.
- Digital Boiler Control:
  - ▶ Control is Self Commissioning, auto adjusts to fuel type and self-calibrates at start-up for correct fuel/air mixture. Control continuously monitors flame signal and adjusts the gas valve during normal operation for maximum efficiency.
  - ▶ 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.




Manufactured by:  
ECR International Inc.  
2201 Dwyer Avenue, Utica, NY 13501  
Tel. 800 325 5479  
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- ▶ Control can accept an optional proprietary 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:
    - 115,500 BTU input down to 16,600 BTU input in Combi mode (6.9:1 turn down).
    - 93,500 BTU input down to 16,600 BTU input in Heat mode (5.6:1 turn down).
  - ▶ 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 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 on heat exchanger, one year on parts.
  - ▶ Warranty is extended to 10 years on heat exchanger, two years parts plus two years labor upon online warranty registration and completion of contractor registration.
- Optional Equipment
  - ▶ Outdoor Air Sensor Kit
  - ▶ Coaxial and Two-pipe venting components
  - ▶ Floor Stand Kit



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|    |                              |         |  |  |                      |
|---|------------------------------|---------|--|--|----------------------|
| Model Number  | CH Input, MBH <sup>(1)</sup> |         | <sup>(1)(2)</sup> CH Heating Capacity, MBH | <sup>(1)(3)</sup> Net AHRI Rating Water, MBH | <sup>(2)</sup> AFUE% |
|   | Maximum                      | Minimum |  |  |                      |
| DCC-115   | 93.5                         | 16.6    | 85.4                                       | 74   | 95.0                 |
| <p>(1) 1000 Btu/hr (British Thermal Units Per Hour)</p> <p>(2) Heating Capacity and AFUE (Annual Fuel Utilization Efficiency) are based on DOE (Department of Energy) test procedures.</p> <p>(3) Net AHRI Ratings based on piping and pickup allowance of 1.15. Contact Technical Support before selecting boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.</p> |                              |         |  |  |                      |

\*Max CH Supply temp 176° F (80°C)

\* Allowance for piping at the bottom of boiler not included.

| Clearances   |                                | Combustible Materials (Required) <sup>(1)</sup> |          | Service <sup>(1)(2)</sup> |          |
|--|--------------------------------|---|----------|---------------------------|----------|
|  |                                | "Width"   | "Height" | "Depth"                   | "Weight" |
| <sup>(1)</sup> Required distances measured from boiler.<br><sup>(2)</sup> Service, proper operation clearance recommendation.<br>* Allowance for piping at bottom of boiler not included | Top                            | 0" (0 mm)                                       |          | 9-13/16" (250 mm)         |          |
|  | Left Side                      | 1-3/4" (45 mm)                                  |          | 1-3/4" (45 mm)            |          |
|  | Right Side                     | 1-3/4" (45 mm)                                  |          | 1-3/4" (45 mm)            |          |
|  | Front                          | 0" (0 mm)                                       |          | 17-3/4" (450 mm)          |          |
|  | Back                           | 0" (0 mm)                                       |          | 0" (0 cm)                 |          |
|  | Bottom                         | 0" (0 mm)                                       |          | *9-13/16" (250 mm)        |          |
|  | Combustion Air/ Venting Piping | 0" (0 mm)                                       |          | 6" (160 mm)               |          |
| Dimension/Weights  | Model                          | "Width"   | "Height" | "Depth"                   | "Weight" |
|  | DCC-115                        | 17-3/4 "  | 30"      | 13-9/16"                  | 103      |
|  |                                | 450 mm  | 763 mm   | 345mm                     | 46.72 kg |



| <b>DCC-115</b>                               |                          |           |            |
|--|--------------------------|-----------|------------|
| <b>Central Heating</b>                       | <b>MAX</b>               |           | <b>MIN</b> |
| Altitude (ft)                                | 0-2000                   | 2000-4500 | -          |
| Heat Input (BTUH)                            | 93,550                   | 88,873    | 16,650     |
| Heat Output (BTUH)                           | 85,400                   | 81,130    | 15,350     |
| CO <sub>2</sub> Setting Natural Gas (%)      | 9.0                      | 9.0       | 8.6        |
| Gas Rate Natural Gas (ft <sup>3</sup> /h)    | 92.08                    | 87.14     | 16.58      |
| CO <sub>2</sub> Setting LP Gas (%)           | 10.0                     | 10.0      | 9.8        |
| Gas Rate LP Gas (ft <sup>3</sup> /h)         | 36.34                    | 34.57     | 6.35       |
| CH Water Temp (°F)                           | 176                      |           |            |
| Supply Connection (inches)                   | 3/4                      |           |            |
| Return Connection (inches)                   | 3/4                      |           |            |
| <b>Domestic Hot Water</b>                    | <b>MAX</b>               |           | <b>MIN</b> |
| Altitude (ft)                                | 0-2000                   | 2000-4500 | -          |
| Heat Input (BTUH)                            | 115,500                  | 109,725   | 16,650     |
| Heat Output (BTUH)                           | 105,500                  | 100,225   | 15,350     |
| CO <sub>2</sub> Setting Natural Gas (%)      | 9.0                      | 8.7       | 8.7        |
| Gas Rate Natural Gas (ft <sup>3</sup> /h)    | 113.60                   | 107.96    | 16.58      |
| CO <sub>2</sub> Setting LP Gas (%)           | 10.0                     | 10.0      | 10.0       |
| Gas Rate LP Gas (ft <sup>3</sup> /h)         | 44.81                    | 42.63     | 6.35       |
| Min Domestic Flow Rate (gpm)                 | 0.55                     |           |            |
| Max. Domestic Flow Rate at a 70°F rise (gpm) | 2.50                     |           |            |
| Domestic Hot Water (°F)                      | 140                      |           |            |
| Domestic Cold Water Inlet (inches)           | 1/2                      |           |            |
| Domestic Hot Water Outlet (inches)           | 1/2                      |           |            |
| <b>Central Heating System</b>                |                          |           |            |
| Max. System Pressure (psi/bar)               | 30 / 2.11                |           |            |
| Min. System Pressure (psi/bar)               | 7.25 / 0.5               |           |            |
| Max. System Temperature (°F)                 | 176                      |           |            |
| Pressure Relief Setting (psi/bar)            | 30 / 2.11                |           |            |
| Recommended System Pressure Cold (psi/bar)   | 21.7 / 1.5               |           |            |
| Expansion Tank size (pre-charge pressure)    | 1.5 gal (US) at 11.6 psi |           |            |



**ECR** international

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**Domestic Hot Water**

|                           |                       |
|---------------------------|-----------------------|
| Max. Inlet Water Pressure | 116 psi / 8 bar       |
| Min. Inlet Water Pressure | 2.9 psi / 0.2 bar     |
| Min. DHW Flow Rate        | 0.55 gpm / 2.50 l/min |
| Max. DHW Temperature      | 140°F / 60°C          |
| DHW Water Content         | 1.05gal / 0.23 L      |

**Electrical**

|                           |           |
|---------------------------|-----------|
| Supply Voltage            | 120v 60Hz |
| Power Consumption (Watts) | 125       |
| Internal Fuse (Amps)      | 3.15      |

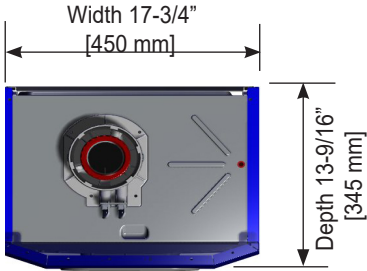
**General**

|                         |        |
|-------------------------|--------|
| Gas Connection (inches) | 3/4    |
| Lift Weight (lbs)       | 102.51 |

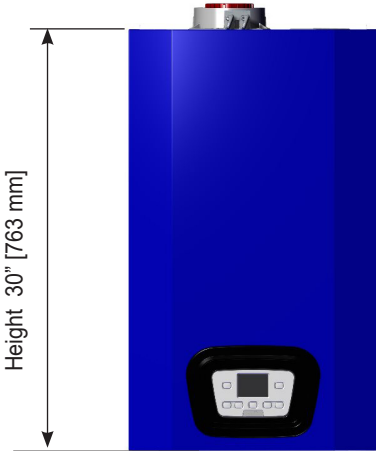
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### Top View



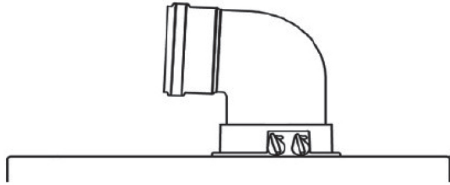
### Front View



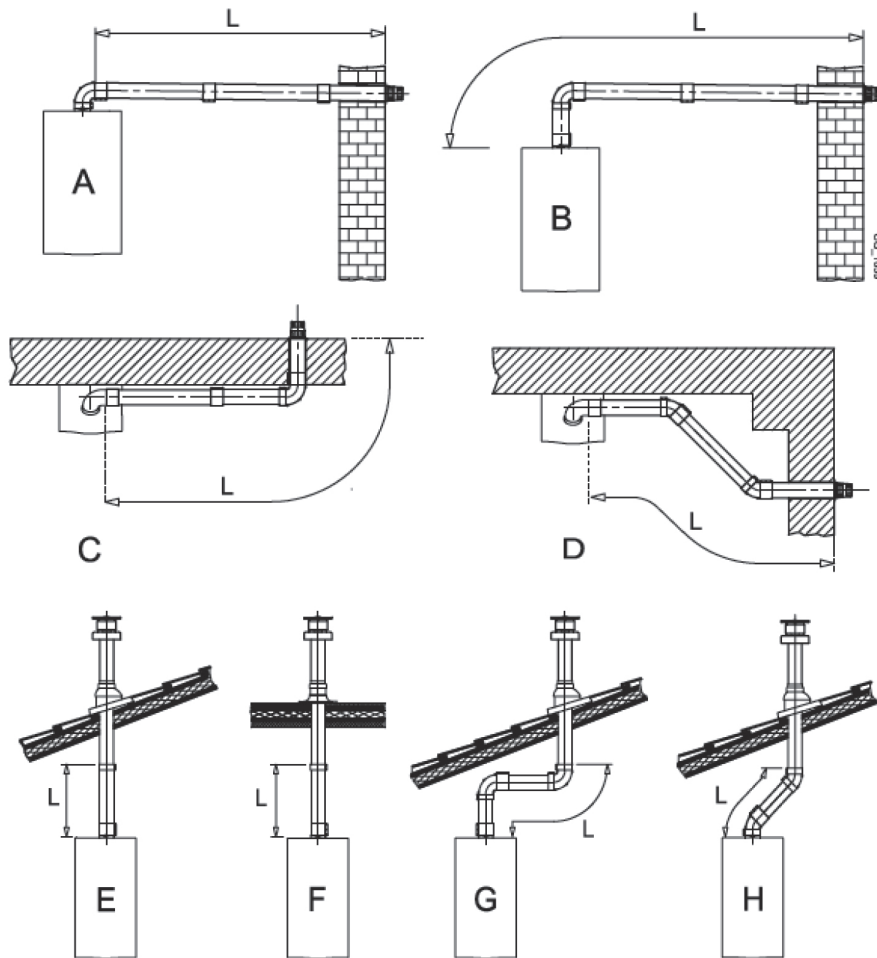
## VENTING OPTIONS

Please refer to the installation manual section 5. VENT SYSTEM for more information.

### Concentric Venting - Ø 100mm/60mm

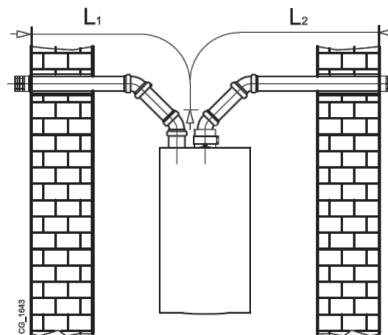
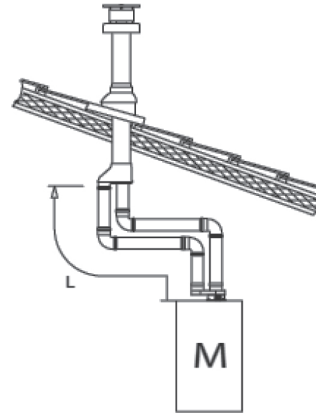
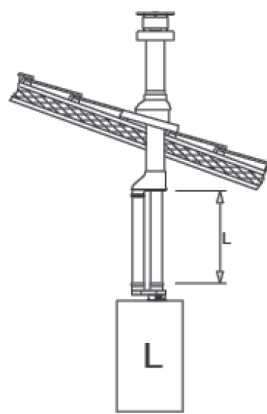
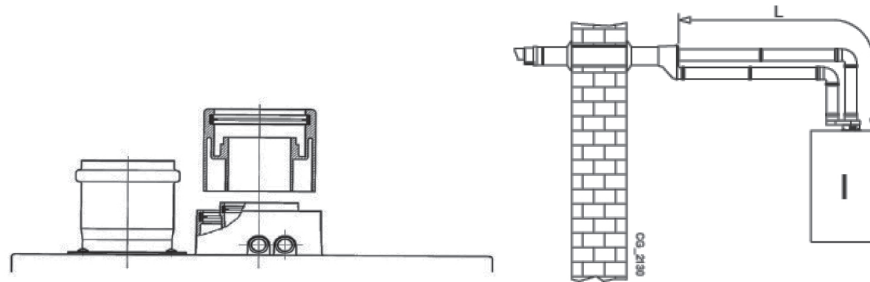


|            |                                      |
|------------|--------------------------------------|
| <b>A B</b> | Lmax = 32.80 / 10.00 m - Ø 60/100 mm |
| <b>C D</b> | Lmax = 29.52 / 9.00 m - Ø 60/100 mm  |
| <b>E F</b> | Lmax = 32.80 / 10.00 m - Ø 60/100 mm |
| <b>G</b>   | Lmax = 26.24 / 8.00 m - Ø 60/100 mm  |
| <b>H</b>   | Lmax = 29.52 / 9.00 m - Ø 60/100 mm  |



## Dual Flue Venting - BAXI Polypro Venting $\varnothing$ 80mm or 3" CPVC S636

|          |                         |
|----------|-------------------------|
| <b>I</b> | L max = 49.20 / 15.00 m |
| <b>L</b> | L max = 49.20 / 15.00 m |
| <b>M</b> | L max = 45.92 / 14.00 m |



L1 MAX = 49.2 ft / 15.00 m  
 L2 MAX = 147.6 ft./45.00 m  
 L1 + L2 = 196.8 ft. / 60.00 m