

# Hamilton EVO-XL Submittal

**HOT WATER BOILER**  
Models HWH 800 / 1000 / 1500

Job \_\_\_\_\_  
 Engineer \_\_\_\_\_  
 Contractor \_\_\_\_\_  
 Prepared By \_\_\_\_\_ Date \_\_\_\_\_  
 Model \_\_\_\_\_ Input \_\_\_\_\_ Unit Tag \_\_\_\_\_

## Standard Equipment

- 316L stainless steel water tube heat exchanger, 160 psi ASME H
- 5:1 burner modulation
- Self-diagnostic microprocessor controls
- Externally adjustable setpoint (0-10v) per appliance
- Sealed combustion
- AL29-4C vent materials
  - Can accommodate PP, CPVC or PVC via use of appropriate adapters
- Pressure relief valve
- Flow switch
- Inlet & outlet water temperature sensor
- Exhaust temperature sensor
- Gas inlet pressure transducer
- Dual high limit (fixed & adjustable)
- 24/7 customer service
- Color LCD display
- CSD-1 compliant
- Manual reset high limit
- Condensate pressure switch
- For domestic and/or hydronic heating applications



**EVO-XL**  
 795,000  
 999,999  
 1,475,000

## HEAT EXCHANGER

- ASME H Stamped
- ASME Inspected and Stamped for 160 PSIG Max Working Pressure
- National Board Registered
- 316L Stainless Construction
- Rolled & Formed in a Helical Pattern
- Headers—Welded 316L Stainless

## ASME PRESSURE RELIEF VALVE

- 50 PSI standard
- \_\_\_\_\_ PSI Special applications, not to exceed 150 PSI

## CSA DESIGN CERTIFIED—LC LISTED

- Hot Water Boiler  
ANSI Z21.13/CSA 4.9-2017, UL 795-2016, CGA 3.4-2020

## CONTROLS

- 208–240V split phase, 1 $\phi$  Power Supply 50/60 Cycle
- Direct Spark Ignition w/Integrated Flame Sensor on Display
- Modulating Digital Control System
- High Limit Control, Manual Reset
  - 198° F – Standard
  - \_\_\_\_\_ Custom
- Side Mounted On/Off Power Switch
- Flow Switch
- Blocked Vent/Condensate Pressure Switch
- Exact Elevation Match to 9,000 feet with no De-Rate
- Gas Pressure Transducer
- CSD-1
- Manual Reset High Limit
- Exhaust Temperature Sensor

## GAS TRAIN

- Manual Gas Shut-Off Valve
- Negative Pressure Gas Valve(s)
- Fuel
  - Natural Gas
  - Propane Gas

## BURNER

- 316L Stainless Steel Premix
- Ultra-Low NO<sub>x</sub>: Less than 13 PPM, adjusted for 3% O<sub>2</sub>
- SCAQMD Certified

## CONSTRUCTION

- Indoor Construction
- Outdoor Construction
- Front Controls
- Rear Exhaust & Inlet Air Connections
- Rear Water, Electrical, Gas and Drain Connections
- Air Vent

## VENTING SYSTEM INFORMATION

- Vent Termination
  - PVC
  - CPVC
  - Stainless Steel

## OPTIONAL CONTROLS

- Cascade
- Low Water Cut Off
- Communication—BMS
  - LON
  - BACnet
  - Modbus

## OPTIONS

- Certified System—UL 795  
Model Number \_\_\_\_\_  
*(Must include all items listed below)*
- Cast Iron Boiler Pump Package \_\_\_\_\_  
220V, 1 $\phi$ , 60Hz  
**Note:** pumps are sized and supplied by factory providing 15% additional head for system connection piping.
- Condensate Neutralizer / Drain **(highly recommended for all systems)**
- Electrical Panel w/Service Disconnects
- Common Gas Manifold
- Pre-Plumbed Piping Manifold
- Expansion Tank \_\_\_\_\_ – \_\_\_\_\_ PSI
- Certified Seismic

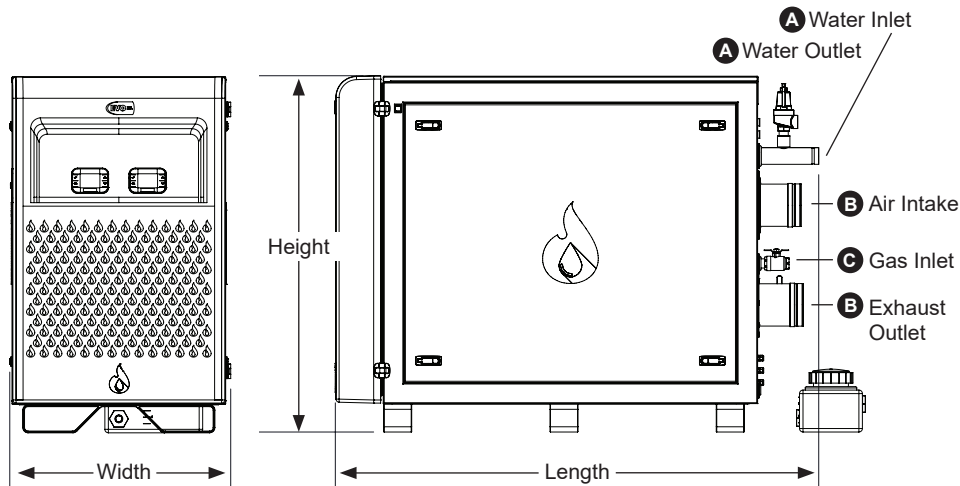


ANSI Z21.13/CSA 4.9-2017,  
UL 795-2016, CGA 3.4-2020

# Hamilton EVO-XL

800 / 1000 / 1500

Model \_\_\_\_\_



## APPLIANCE DIMENSIONS

Heater/Boiler														
Model	Width		Height		Depth		A (VIC Groove)		B		C		Shipping Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
HWH800	31.6	803.2	51	1295	51	1295	2	50	6	152	1.5	38	650	295
HWH1000	31.6	803.2	51	1295	69.2	1757.4	2	50	6	152	1.5	38	750	340
HWH1500	31.6	803.2	51	1295	69.2	1757.4	2	50	8	203	1.5	38	850	385

## APPLIANCE INFORMATION

Model	Input		Water Heater* Output		Boiler Output**		Recovery @ 100°FΔT (55.6°CΔT)		Recovery @ 80°FΔT (44.5°CΔT)		Recovery @ 60°FΔT (33.3°CΔT)		Water Flow Rate & Pressure Drop Heating	
	BTU/Hr	kW	BTU/Hr	kW	BTU/Hr	kW	GPH	LPH	GPH	LPH	GPH	LPH	GPM@FT	LPM@M
HWH800	795,000	233	up to 771,150	up to 226	up to 755,250	up to 221	926	3,505	1,157	4,380	1,543	5,841	30.2@7'	114@2.1M
HWH1000	999,999	293	up to 969,999	up to 284	up to 949,999	up to 278	1,164	4,406	1,456	5,512	1,941	7,348	38.0@8.5'	144@2.6M
HWH1500	1,475,000	432	up to 1,430,750	up to 419	up to 1,401,250	up to 410	1,718	6,494	2,147	8,115	2,863	10,822	56.8@10.3'	215@3.1M

\*At 97% thermal efficiency with 86°F incoming water to heat exchanger

\*\*At 95% thermal efficiency with 140°F incoming water to heat exchanger

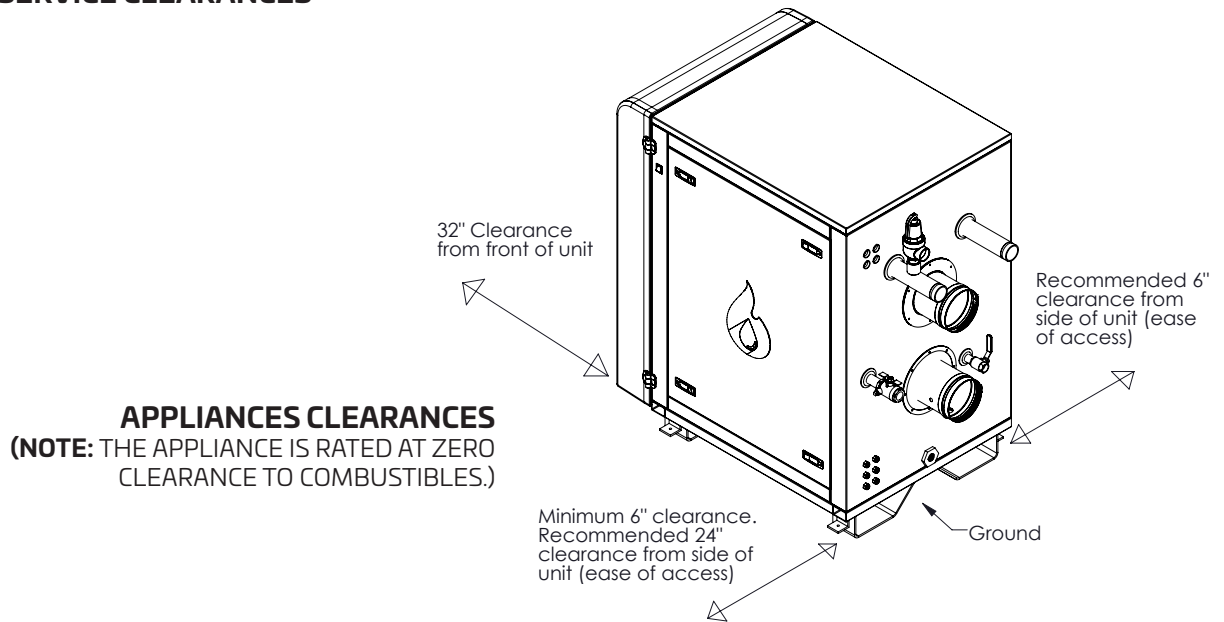
## ELECTRICAL CHARACTERISTICS FOR EVO PRODUCTS

208 Volt Power Supply			
Model	Amps/unit	Boiler Pump	Total amps Boiler
HWH 800	4.44	0.47	4.91
HWH 1000	5.88	0.55	6.44
HWH 1500	9.17	0.96	10.13

240 Volt Power Supply			
Model	Amps/unit	Boiler Pump	Total amps Boiler
HWH 800	3.85	0.40	4.25
HWH 1000	5.1	0.48	5.58
HWH 1500	7.95	0.83	8.78

Note: No load switching is possible directly from the BCB or CCB, it may only switch a relay signal.

## RECOMMENDED SERVICE CLEARANCES



## WATER PIPING MANIFOLD FOR EVO PRODUCTS

Model	Boiler Only GPM ΔP	Design ΔT					
				Single	Double	Triple	Quad
HW 800	30.2@2'	50.0 °F	27.8 °C	1.5"	2"	2.5"	3"
HW 1000	38.0@2.6'	50.0 °F	27.8 °C	2"	2.5"	3"	4"
HW 1500	56.8@5.3'	50.0 °F	27.8 °C	2"	3"	4"	6"

**Note:** Flow rates shown above are for clean, closed loop systems, if there is any doubt about system cleanliness proper precautions should be taken.

## VENTING THE EVO

**Please note:** You **MUST** confirm local codes as related to venting materials, required markings, etc. Parts of Canada have very specific vent material requirements.

Model	Vent Diameter	Standard Vent Type	Optional Vent Type	Minimum Combined Vent Length	Maximum Combined Length
HW 800	6"	Stainless	Plastic	6' + (2) 90° elbows	240'
HW 1000	6"	Stainless	Plastic	6' + (2) 90° elbows	180'
HW 1500	8"	Stainless	Plastic	6' + (2) 90° elbows	400'

**Note:** For concrete construction or to meet certain fire codes, exhaust and inlet piping at the wall penetration to the EVO must be CPVC Schedule 40 or 80 or Stainless. The balance from the penetrated wall to the outside may be PVC Schedule 40 or 80.