

Hamilton EVO-XL Submittal

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

ASME PRESSURE RELIEF VALVE

- 125 PSI standard
- _____ PSI Special applications, not to exceed 150 PSI

CSA DESIGN CERTIFIED—LC LISTED

- Gas Water Heaters Volume III
ANSI Z21.10.3/CSA 4.3-2019, UL 795-2016, CGA 3.4-2020
- Hot Water Boiler
ANSI Z21.13/CSA 4.9-2017, UL 795-2016, CGA 3.4-2020

CONTROLS

- 208–240V split phase, 1 ϕ 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_x: Less than 13 PPM, adjusted for 3% O₂

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)
- All Stainless Steel Heater Pump Package _____
220V, 1 ϕ , 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

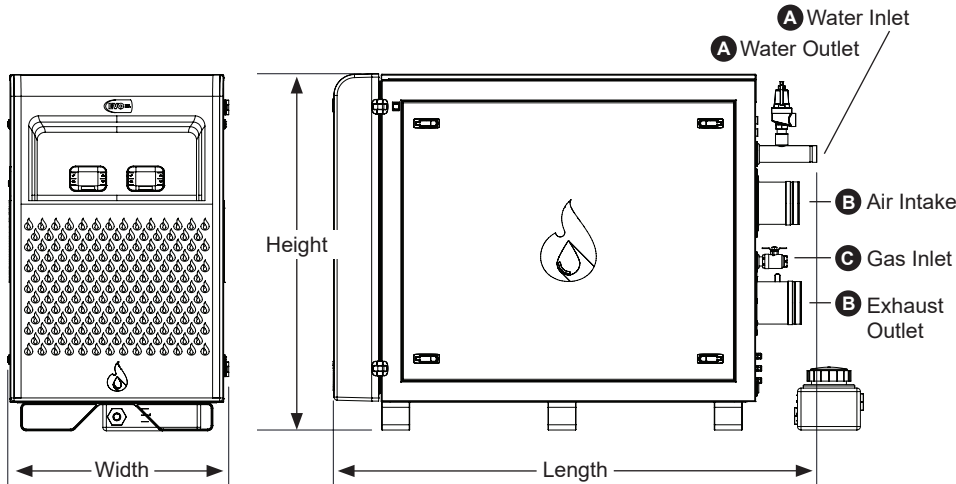


ANSI Z21.10.3/CSA 4.3-2019,
ANSI Z21.13/CSA 4.9-2017,
UL 795-2016, CGA 3.4-2020

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 |
| HWD800 | 31.6 | 803.2 | 51 | 1295 | 51 | 1295 | 2 | 50 | 6 | 152 | 1.5 | 38 | 650 | 295 |
| HWD1000 | 31.6 | 803.2 | 51 | 1295 | 69.2 | 1757.4 | 2 | 50 | 6 | 152 | 1.5 | 38 | 750 | 340 |
| HWD1500 | 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 |
| HWD800 | 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 |
| HWD1000 | 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 |
| HWD1500 | 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

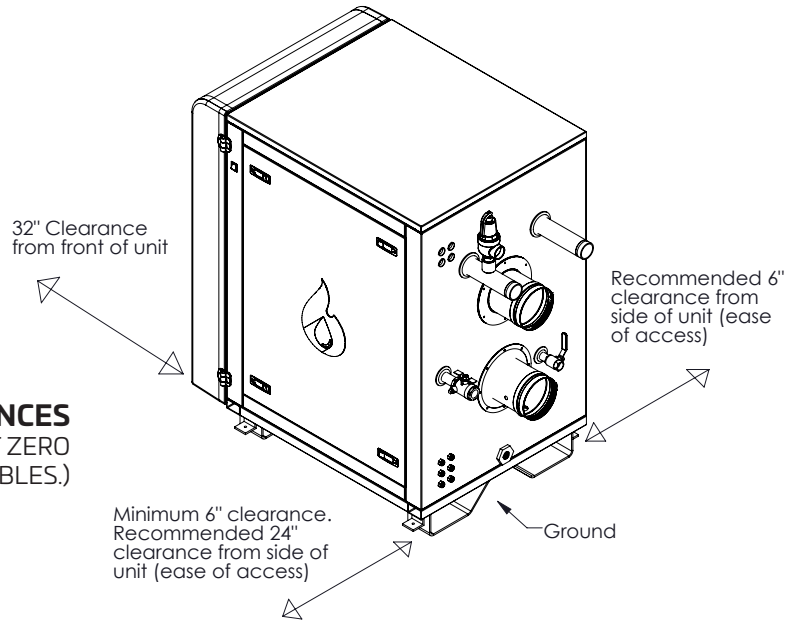
| 208 Volt Power Supply | | | |
|-----------------------|-----------|-------------|-------------------|
| Model | Amps/unit | Heater Pump | Total amps Boiler |
| HWD 800 | 4.44 | 0.96 | 5.40 |
| HWD 1000 | 5.88 | 1.32 | 7.21 |
| HWD 1500 | 9.17 | 2.04 | 11.22 |

| 240 Volt Power Supply | | | |
|-----------------------|-----------|-------------|-------------------|
| Model | Amps/unit | Heater Pump | Total amps Boiler |
| HWD 800 | 3.85 | 0.83 | 4.68 |
| HWD 1000 | 5.1 | 1.15 | 6.25 |
| HWD 1500 | 7.95 | 1.77 | 9.72 |

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

RECOMMENDED SERVICE CLEARANCES

APPLIANCES CLEARANCES (NOTE: THE APPLIANCE IS RATED AT ZERO CLEARANCE TO COMBUSTIBLES.)



WATER PIPING MANIFOLD FOR EVO PRODUCTS

| Model | GPM ΔP^* | Design ΔT | | Minimum Manifold Pipe Size | | | |
|---------|------------------|-------------------|---------|----------------------------|--------|--------|------|
| | | | | Single | Double | Triple | Quad |
| HW 800 | 51.4@12' | 30.0 °F | 16.7 °C | 2" | 3" | 4" | 6" |
| HW 1000 | 64.7@13.2' | 30.0 °F | 16.7 °C | 2.5" | 4" | 4" | 6" |
| HW 1500 | 82.9@17.3' | 35.0 °F | 19.4 °C | 2.5" | 4" | 6" | 6" |

*Water heater and piping as described above.

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.