



**Lochinvar**<sup>®</sup>  
High Efficiency Water Heaters, Boilers and Pool Heaters

**ARMOR**  
**Condensing Water Heater**  
**Submittal Sheet**

**AWP-Sub-08**

**ARMOR™ CONDENSING WATER HEATER PACKAGE SYSTEM**

**JOB NAME** \_\_\_\_\_

**LOCATION** \_\_\_\_\_

**ARCH./ENGR.** \_\_\_\_\_

**WHOLESALER** \_\_\_\_\_

**MECH. CONTRACTOR** \_\_\_\_\_

**MODEL NO.** \_\_\_\_\_

**TYPE GAS** \_\_\_\_\_

**Btu/hr INPUT** \_\_\_\_\_

**RECOVERY RATE IN GPH** \_\_\_\_\_ @ \_\_\_\_\_ °F RISE

**NOTES**

**STANDARD FEATURES**

- › Up to 98% Thermal Efficiency
- › **Modulating Burner with 5:1 Turndown**
  - › Direct-Spark Ignition
  - › Low NOx Operation
  - › Sealed Combustion
  - › Low Gas Pressure Operation
- › **Vertical & Horizontal Direct-Vent**
  - › PVC, CPVC or SS Venting up to 100 Feet
  - › PVC/CPVC Sidewall Vent Termination
- › **Stainless Steel Heat Exchanger**
  - › All Welded Construction, Gasketless Design
  - › 160 psi Working Pressure
  - › ASME Construction (AW 286-800)
- › Natural to L.P. Conversion Kit
- › All Bronze Circulating Pump
- › On/Off Switch
- › Flow Switch
- › ASME Temperature & Pressure Relief Valve (286-801)
- › Temperature & Pressure Gauge (AW 501-801)
- › Downstream Test Valves (AW 501-801)
- › Adjustable Leveling Legs
- › Tank Sensor
- › Adjustable High Limit w/ Manual Reset
- › Automatic Reset High Limit
- › Condensate Trap
- › Zero Clearances to Combustible Material
- › 5 Year Limited Warranty (See Warranty for Details)
- › 1 Year Parts Warranty (See Warranty for Details)

**SMART SYSTEM FEATURES**

- › **SMART SYSTEM Digital Operating Control**
- › Multi Color Graphic LCD Display
- › **Built in Cascading Sequencer for up to 8 Water Heaters**
  - › Lead Lag
  - › Efficiency Optimization
- › **Building Management System Integration**
  - › Modbus Communication (Optional)
  - › 0-10VDC Input to Control Modulation or Set point
  - › 0-10VDC Modulation Rate Output
  - › 0-10VDC Input to Enable/Disable call for heat
- › Access to BMS Settings Through Graphic LCD Display
- › Low Water Flow Safety Control & Indication
- › Inlet & Outlet Temperature Sensors & Readout
- › Flue Temperature Sensor
- › Water Heater Pump Control
- › Pump Delay with Freeze Protection
- › Pump Exercise
- › Night Setback
- › Building Recirculation loop Pump Control\*
  - › Night Setback of Building Recirculation Loop\*
- › Time Clock
- › **Maintenance Reminder**
  - › Ability to program name and number into the product as contact
- › **High Voltage Terminal Strip**
  - › 120 VAC / 60 Hertz / 1 Phase Power Supply
  - › Pump Control Contacts
    - › Water Heater Pump Control Contacts
    - › Building Recirculation Pump Control Contacts
- › **Low Voltage Terminal Strip**
  - › 24 VAC Auxiliary Device Relay
  - › Auxiliary Proving Switch Contacts
  - › Flow Switch Contacts
  - › Alarm on Any Failure Contacts
  - › Runtime Contacts
  - › Tank Sensor Contacts
  - › Cascade Contacts
  - › 0-10 VDC BMS External Control Contact
  - › 0-10VDC Boiler Rate Output Contacts
  - › Modbus Contacts

**OPTIONAL EQUIPMENT**

- › Alarm Bell
- › Condensate Neutralization Kit
- › High & Low Gas Pressure Switches (AW 501-801)
- › Concentric Vent Kit (3" & 4" PVC/CPVC only)
- › ModBus Communications
- › SMART SYSTEM PC Software
- › Room Air Vent Kits
- › Stack Frame

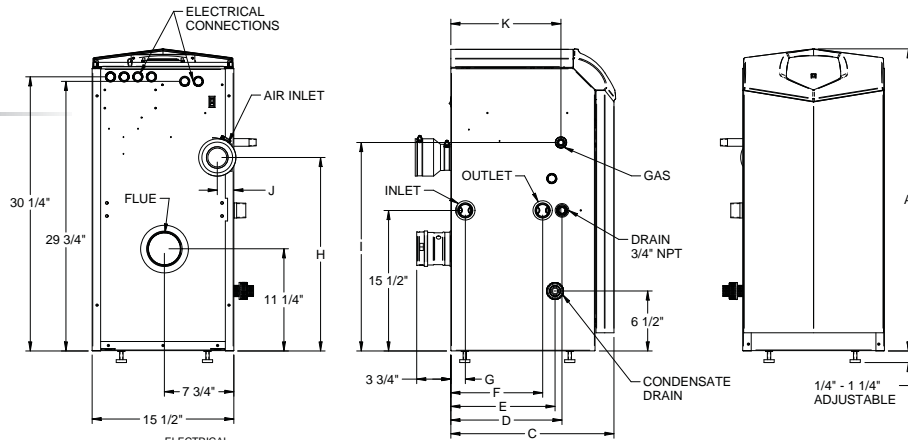
**FIRING CONTROL SYSTEMS**

- › M9 Standard Construction
- › M7 California Code (AW 286-801)
- › M13 CSD1 / FM / GE Gap (AW 501-801)

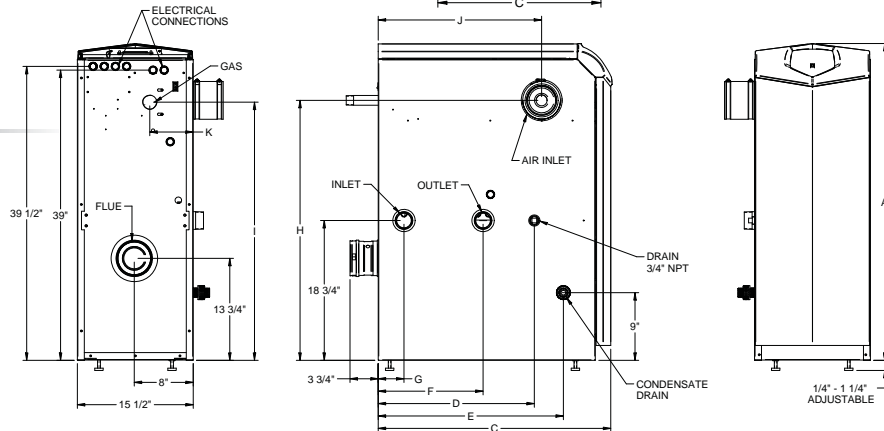
\*Exclusive to Lochinvar

# ARMOR Condensing Water Heater Dimensions & Specifications

## MODELS 150-199



## MODELS 285-800

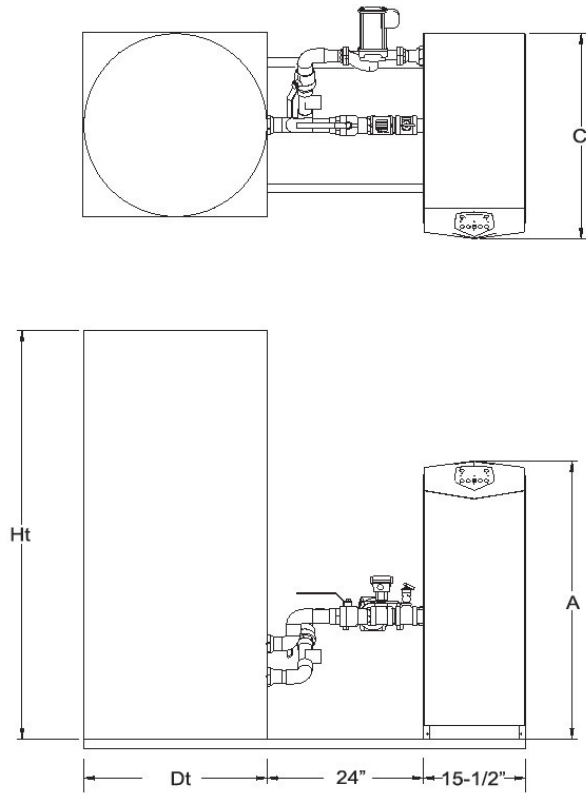


| Model Number | Btu/hr Input | GPH @ 100° Rise | A       | C       | D       | E       | F       | G      | H       | I       | J       | K       | Gas Conn. | Water Conn. | Air Inlet | Vent Size | Shipping Wt. (lbs.) |
|--------------|--------------|-----------------|---------|---------|---------|---------|---------|--------|---------|---------|---------|---------|-----------|-------------|-----------|-----------|---------------------|
| AWN151PM     | 150,000      | 174             | 33-1/4" | 18"     | 12-1/4" | 11-1/2" | 10"     | 1-1/2" | 21-1/4" | 23"     | 1-3/4"  | 12"     | 1/2"      | 1-1/4"      | 3"        | 3"        | 165                 |
| AWN200PM     | 199,999      | 235             | 33-1/4" | 22-1/4" | 16-1/2" | 15-3/4" | 14-1/4" | 5-1/4" | 21-1/4" | 23"     | 1-3/4"  | 16-1/4" | 1/2"      | 1-1/4"      | 3"        | 3"        | 185                 |
| AWN286PM     | 285,000      | 339             | 42-1/2" | 19-3/4" | 12-3/4" | 13-1/2" | 6"      | 2"     | 34"     | 31"     | 11-3/4" | 4-1/4"  | 3/4"      | 2"          | 4"        | 4"        | 235                 |
| AWN400PM     | 399,999      | 475             | 42-1/2" | 27"     | 21"     | 20-3/4" | 14"     | 3-1/2" | 34"     | 34"     | 18-3/4" | 2"      | 1"        | 2"          | 4"        | 4"        | 295                 |
| AWN501PM     | 500,000      | 594             | 42-1/2" | 31-1/2" | 21"     | 25"     | 14"     | 3-1/2" | 35"     | 35"     | 22"     | 5-3/4"  | 1"        | 2"          | 4"        | 4"        | 335                 |
| AWN601PM     | 600,000      | 713             | 42-1/2" | 36-1/4" | 25"     | 21"     | 14"     | 3-1/2" | 36"     | 32-3/4" | 19-1/2" | 5-1/2"  | 1"        | 2"          | 4"        | 4"        | 380                 |
| AWN701PM     | 700,000      | 832             | 42-1/2" | 40-1/4" | 29"     | 23"     | 17"     | 3-1/2" | 36"     | 32-3/4" | 23-1/2" | 3-1/4"  | 1"        | 2"          | 4"        | 6"        | 461                 |
| AWN801PM     | 800,000      | 950             | 42-1/2" | 45-1/4" | 33-1/4" | 23"     | 17"     | 3-1/2" | 36"     | 32-3/4" | 27-3/4" | 3-1/4"  | 1"        | 2"          | 4"        | 6"        | 527                 |

# Armor Package Systems Gas Water Heater Dimensions & Specifications

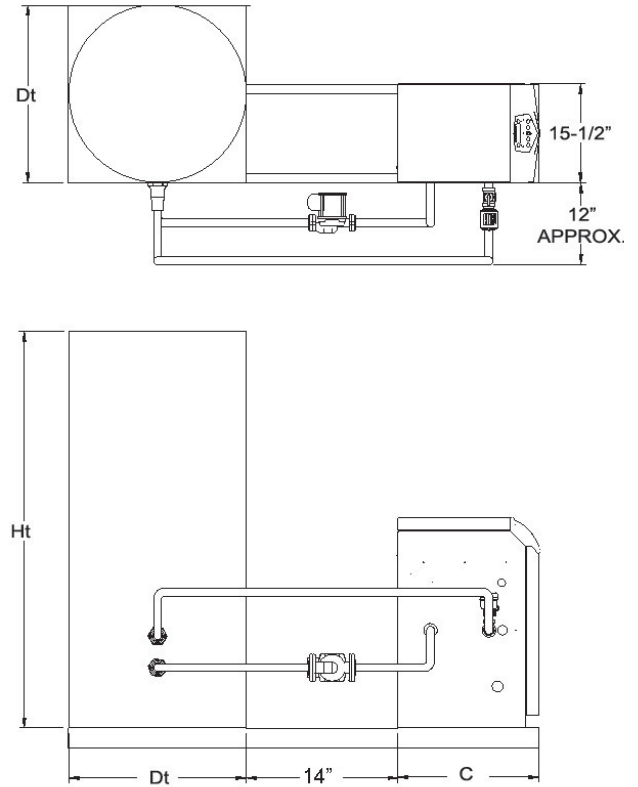
## PS Configuration

AW 150-500 with a 119-504 gallon capacity Jacketed and Insulated Lock-Temp Vertical Tank.



## PU Configuration

AW 150-500 with a 119-504 gallon capacity Jacketed and Insulated Lock-Temp Vertical Tank.



| VERTICAL ROUND JACKETED TANK DIMENSIONS |                |                |        |
|---|----------------|----------------|--------|
| Gallon                                  | H <sub>T</sub> | D <sub>T</sub> | Weight |
| 119                                     | 62-1/2"        | 28"            | 345    |
| 200                                     | 77-1/4"        | 32"            | 600    |
| 257                                     | 91"            | 34"            | 1108   |
| 318                                     | 80"            | 40"            | 1290   |
| 432                                     | 80"            | 46"            | 1,512  |
| 504                                     | 92"            | 46"            | 1,623  |

**NOTE:** Tanks over 500 gallon are available for package systems. Vertical tanks over 650 gallons require breakaway frames for shipping purposes. Consult factory for details.

**NOTE:** If overall dimensions are critical consult factory.  
All package systems are skid mounted.  
\*Add 3" to tank H<sub>T</sub> for I-Beam skid.

Package systems with multiple units or storage tanks 752 gallons and larger will be designed as a "Breakaway" system. Breakaway systems are factory disassembled for shipping purposes and require some field reassembly. Consult factory for details.



Lochinvar Corporation • 300 Maddox Simpson Pkwy • Lebanon, TN 37090 • 615-889-8900 / Fax: 615-547-1000  
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