



# Lochinvar®

HIGH EFFICIENCY BOILERS & WATER HEATERS

## ARMOR™ CONDENSING WATER HEATER PACKAGE SYSTEM

Submittal Sheet

AWP-Sub-09

### ARMOR™ CONDENSING WATER HEATER PACKAGE SYSTEM

Job Name: \_\_\_\_\_ Model No. \_\_\_\_\_ Type Gas \_\_\_\_\_  
Location: \_\_\_\_\_ Recovery Rate in GPH \_\_\_\_\_ @ \_\_\_\_\_ °F Rise  
Engineer: \_\_\_\_\_ Configuration \_\_\_\_\_ Tank Cap. \_\_\_\_\_  
Agent/Wholesaler: \_\_\_\_\_ Equipment Tag(s): \_\_\_\_\_  
Contractor: \_\_\_\_\_

#### NOTES:

#### Standard Features

- › AHRI Certified 96% 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, Polypropylene 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 286-801)
- › Natural to L.P. Conversion Kit
- › Stainless Steel Circulating Pump
- › On/Off Switch
- › Flow Switch
- › ASME Temperature & Pressure Relief Valve (286-801)
- › 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
- › California Code Compliant
- › 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
  - › Front-End Loading Capability with CopperFin II
- › Building Management System Integration
  - › Modbus Communication (Optional)
  - › 0-10 VDC Input to Control Modulation or Set point
  - › 0-10 VDC Modulation Rate Output
  - › 0-10 VDC 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 enter service contact info into product
- › 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
  - › 0-10 VDC Boiler Rate Output Contacts



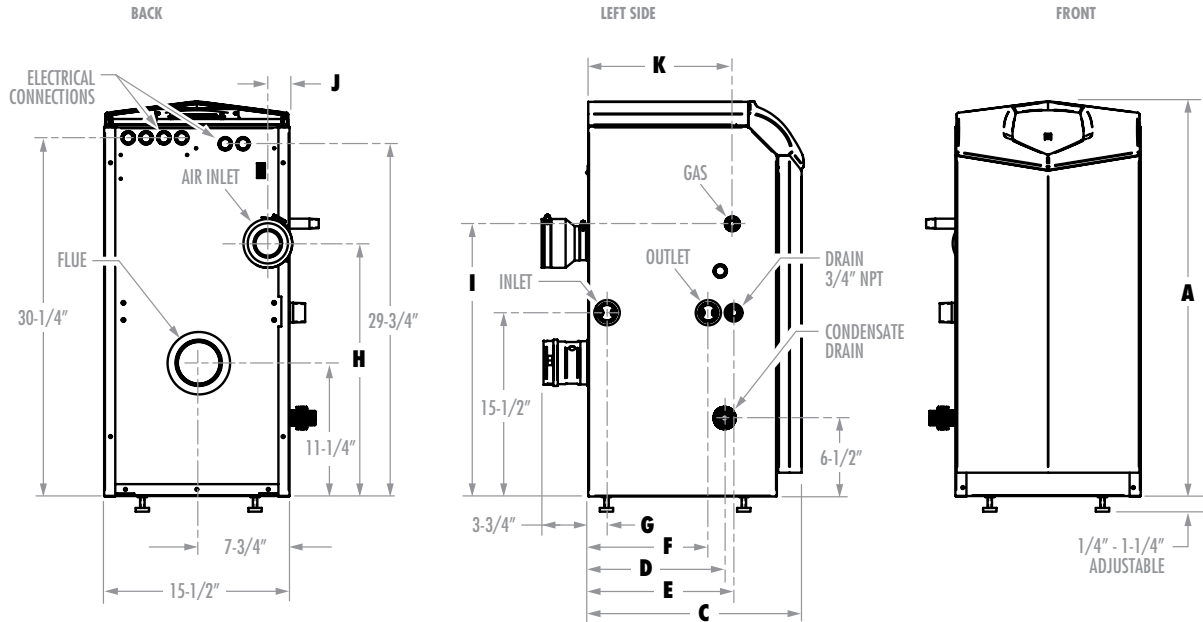
#### Optional Equipment

- CON-X-US® Remote Connectivity
- Alarm Bell
- Condensate Neutralization Kit
- High & Low Gas Pressure Switches (AW 501-801)
- Concentric Vent Kit (3" & 4" PVC/CPVC only)
- BMS Gateway for LonWorks or BACnet
- ModBus Communications
- SMART SYSTEM PC Software
- Room Air Vent Kits
- Stack Frame

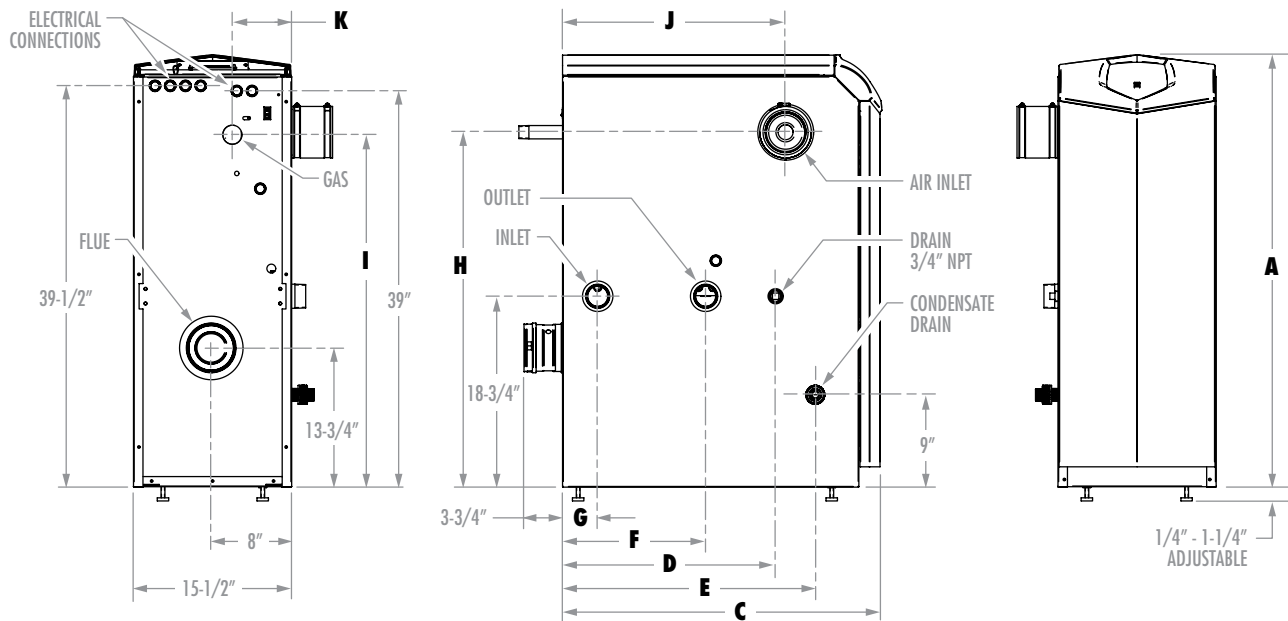
\*Exclusive to Lochinvar

# Armor™ Condensing Water Heater DIMENSIONS & SPECIFICATIONS

Models: AW 151-200



Models: AW 286-801



| 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 | Ship Wt. (lbs.) |
|--------------|--------------|-----------------|---------|---------|---------|---------|---------|--------|---------|---------|---------|---------|-----------|-------------|-----------|-----------|-----------------|
| AWN151PM     | 150,000      | 175             | 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      | 233             | 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"        | 181             |
| AWN286PM     | 285,000      | 332             | 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"        | 236             |
| AWN400PM     | 399,999      | 466             | 42-1/2" | 27"     | 21"     | 20-3/4" | 14"     | 3-1/2" | 34"     | 34"     | 18-3/4" | 2"      | 1"        | 2"          | 4"        | 4"        | 306             |
| AWN501PM     | 500,000      | 582             | 42-1/2" | 31-1/2" | 21"     | 25"     | 14"     | 3-1/2" | 35"     | 35"     | 22"     | 5-3/4"  | 1"        | 2"          | 4"        | 4"        | 339             |
| AWN601PM     | 600,000      | 699             | 42-1/2" | 36-1/4" | 21"     | 25"     | 14"     | 3-1/2" | 36"     | 32-3/4" | 19-1/2" | 5-1/2"  | 1"        | 2"          | 4"        | 4"        | 380             |
| AWN701PM     | 700,000      | 815             | 42-1/2" | 40-1/4" | 23"     | 29"     | 17"     | 3-1/2" | 36"     | 32-3/4" | 23-1/2" | 3-1/4"  | 1"        | 2"          | 4"        | 6"        | 461             |
| AWN801PM     | 800,000      | 931             | 42-1/2" | 45-1/4" | 23"     | 33-1/4" | 17"     | 3-1/2" | 36"     | 32-3/4" | 27-3/4" | 3-1/4"  | 1"        | 2"          | 4"        | 6"        | 527             |

All information subject to change. Change "N" to "L" for LP gas models.



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## Armor™ Package Systems DIMENSIONS & SPECIFICATIONS

All configurations are shown with an AW 151-801 and a 119-504 gallon capacity jacketed and insulated Lock-Temp tank.

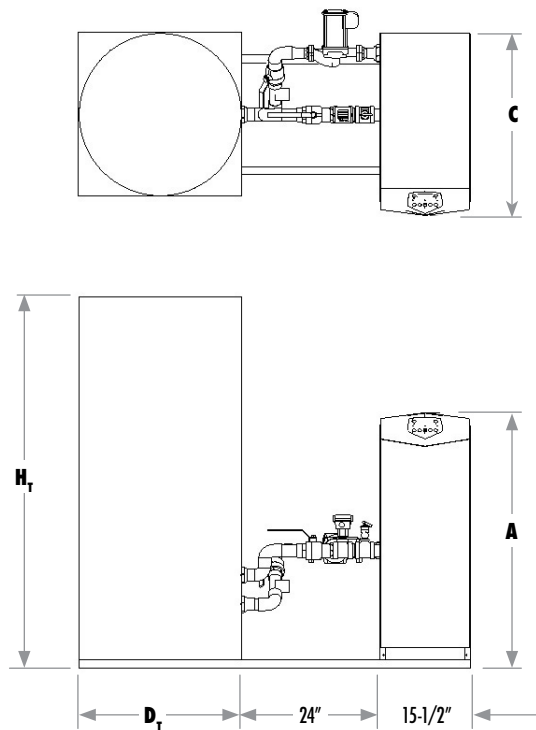
All package systems are skid mounted. Add 3" to tank  $H_T$  for channel iron skid.

| JACKETED TANK DIMENSIONS |         |       |               |
|--------------------------|---------|-------|---------------|
| Gallon                   | $H_T$   | $D_T$ | Weight (lbs.) |
| 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         |

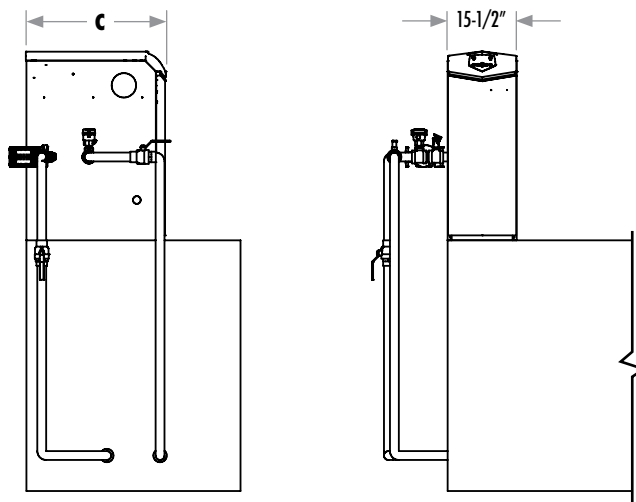
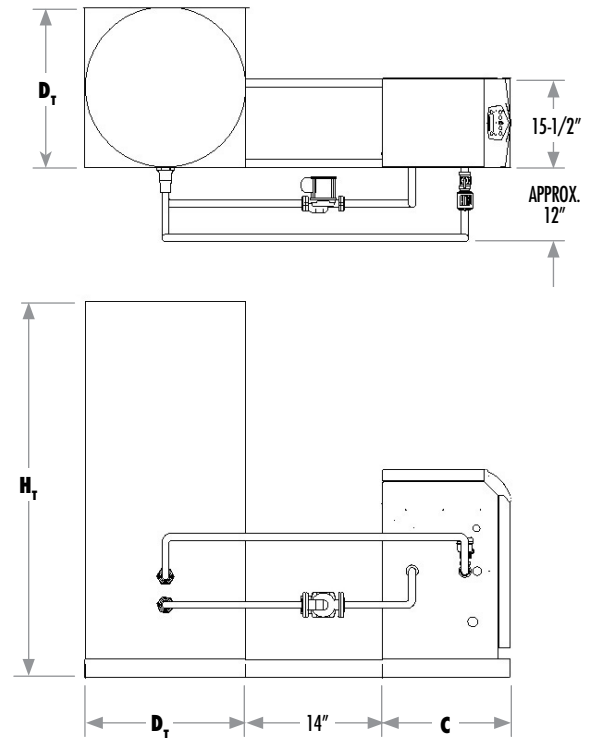
### NOTES:

- Tanks over 500 gallon are available for package systems.
- Package systems with multiple units or storage tanks 752 gallons and larger will be designed as a "Breakaway" system.
- Vertical tanks over 650 gallons require breakaway frames for shipping purposes.
- Breakaway systems and frames are factory disassembled for shipping purposes and require some field reassembly.
- Consult factory for additional information and if equipment room dimensions are critical.

### PS Configuration

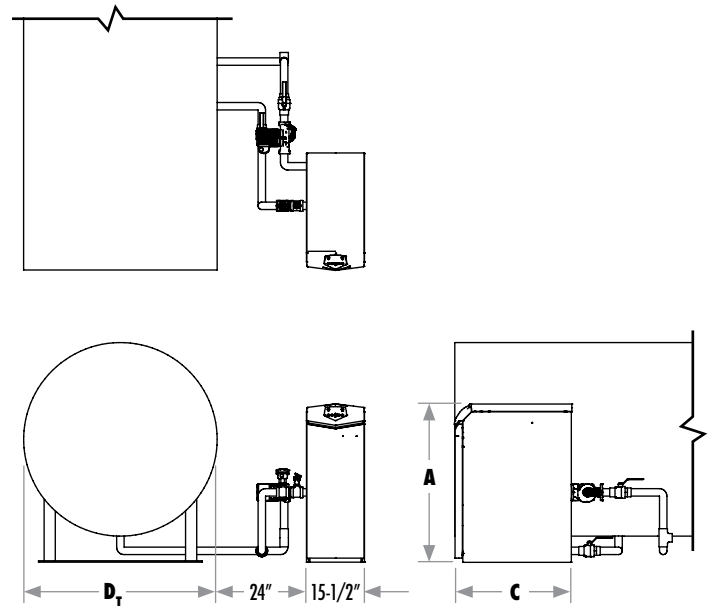


### PU Configuration



Consult factory for overall dimensions

### PT Configuration



### PW Configuration