

# CONDENSING COMMERCIAL GAS WATER HEATERS



**CON•X•US®** REMOTE CONNECT



TOUCHSCREEN CONTROL FEATURING A BUILT-IN  
CASCADING SEQUENCER

FIVE MODELS FROM 1.25 TO 4.0M BTU/HR

TURNDOWN RATIO 5:1

INDOOR AND OUTDOOR MODELS

DIRECT-VENT FLEXIBILITY UP TO 150 FEET



**98%**  
**THERMAL EFFICIENCY**



DESIGNED ★ ENGINEERED ★ ASSEMBLED

**USA**

[Lochinvar.com](http://Lochinvar.com)



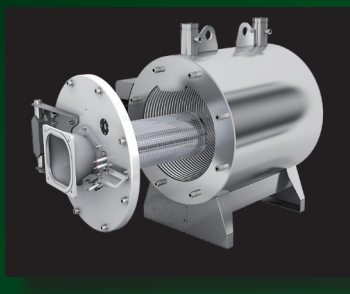
## AN INNOVATION IN COMMERCIAL WATER HEATING

The ARMOR Commercial Condensing Water Heater features Stainless Steel heat exchanger technology to deliver 98% Thermal Efficiency. Lochinvar introduces five large input models with 1.25, 1.5, 2.0, 3.0 and 4.0 million BTU/hr input rates.

ARMOR innovation continues with the SMART TOUCH™ control system featuring touchscreen technology, Building Automation System interface, optional Modbus or BACnet communication and a Lochinvar exclusive, the CON-X-US® mobile communication platform.

Couple the ARMOR with a Lock-Temp Storage Tank for long system life and high performance. To optimize system foot print, deliver the best system appearance and reduce installation costs, consider allowing Lochinvar to create a custom water heater package for your application.” Each package is custom built, factory assembled and tested to meet the requirements of the job. All packages include a welded channel iron skid for the water heater(s) and storage tank(s) which provide easy and fast installation.

Now more than ever, the ARMOR delivers a wide range of commercial sizes and features while offering “green” technology that building owners and facility managers desire.



### STAINLESS STEEL CONDENSING HEAT EXCHANGER

The heart of the ARMOR is the advanced 316L Stainless Steel, condensing heat exchanger. Built to ASME Section IV requirements, the large input models employ a next generation heat exchanger. Constructed with superior grade 316L Stainless Steel, the heat exchanger's condensing design will heat water at a high 98% Thermal Efficiency. The design features a slide out door for improved accessibility and maintenance flexibility.

### 5:1 TURNDOWN

The ARMOR employs an advanced NEG/REG combustion system achieving 5:1 turndown. The gas/air mixture is precisely controlled across the entire turndown range to produce ideal combustion and accurate heat transfer. The turndown ratio matches the heat demand to prevent short cycling or temperature overshoot.

### DIRECT-VENTING UP TO 150 FEET

ARMOR offers 6 venting options and tremendous flexibility for placement of units within the building, because it permits direct-vent air intake and exhaust runs up to 150 equivalent feet using either PVC, CPVC, Polypropylene or AL29-4C stainless steel vent pipe. Intake and exhaust runs can terminate horizontally through a sidewall or vertically through the roof. In addition, we offer two vent sizes for the AWH1250N and AWH1500N models depending upon total equivalent vent length. These models may be vented in 6" diameter vent up to 70 equivalent feet or in 8" diameter vent up to 150 equivalent feet. Note: AWH3000N is available up to 100 equivalent feet only.



## WATER HEATER CONTROL, FROM ANYWHERE.

ARMOR features the next generation of Lochinvar's all-in-one SMART TOUCH™ operating control with the integration of the CON-X-US® advanced technology. SMART TOUCH provides outstanding functionality and can be integrated directly into a Building Automation System via Modbus or BACnet.

The CON-X-US mobile communication platform provides the ability to monitor and manage multiple ARMOR water heaters without ever stepping into the mechanical room. CON-X-US will send alerts via text or email notifying of changes in system status, and a user can check system status and re-program control functions anytime, anywhere. Once downloaded, the free CON-X-US mobile app connects using any internet capable device.

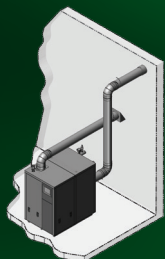


## OUTDOOR MODELS FOR WARM WEATHER CLIMATES

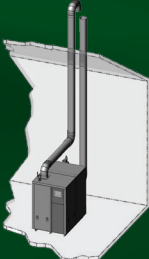
ARMOR Condensing Water Heaters are certified for outdoor installation in warm weather climates like California and Florida. Louvers on the side of the water heater replace the top air intake. The gas connection is routed through the side of the water heater and the touch screen receives a cover for UV protection. Models can be factory assembled for outdoor installations or indoor models may be field converted quickly for outdoor use with a conversion kit.

## 6 FLEXIBLE VENTING OPTIONS - Up to 150 feet of air intake and 150 feet of exhaust vent with PVC, CPVC, Polypropylene or Stainless Steel.

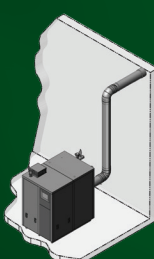
Direct Vent Sidewall



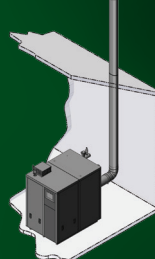
Direct Vent Vertical



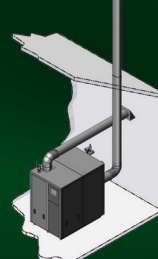
Room Air Sidewall



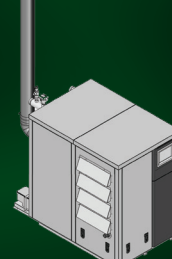
Room Air Vertical



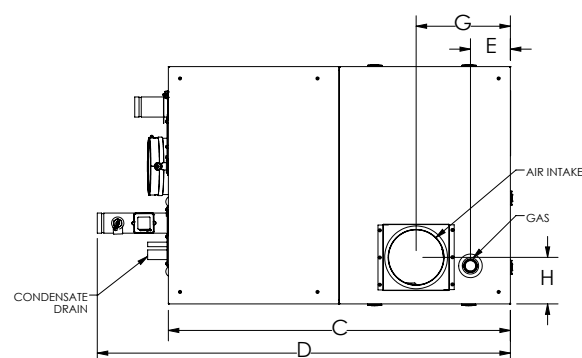
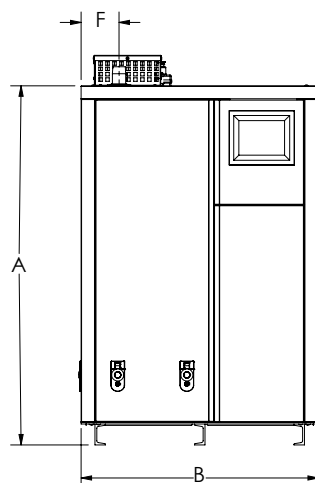
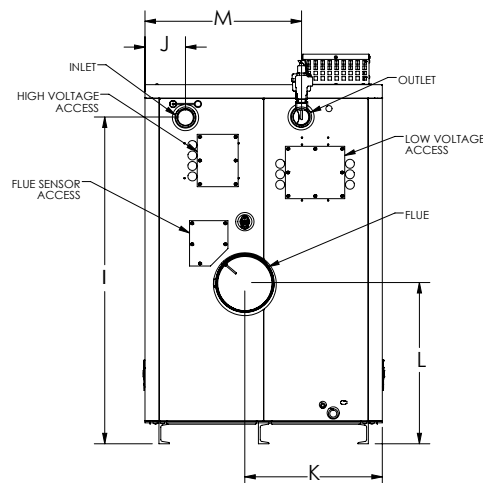
Vertical w/Sidewall Air



Outdoor



# DIMENSIONS AND SPECIFICATIONS



## ARMOR WATER HEATER

Model Number	Btu/Hr Input	Thermal Efficiency	GPH 100°F Rise
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AWH1250NPM	1,250,000	98%	1,485
AWH1500NPM	1,500,000	98%	1,782
AWH2000NPM	1,999,999	98%	2,376
AWH3000NPM	3,000,000	98%	3,564
AWH4000NPM	4,000,000	98%	4,752

Change 'N' to 'L' for LP gas models. No deration on LP models. Performance data is based on manufacturer test results.  
For AWH models - Add "O" at end for Outdoor Models.

## DIMENSIONS AND SPECIFICATIONS

	A	B	C	D	E	F	G	H	I	J	K	L	M	Gas Conn.	Water Conn.	Air Inlet	Vent Size	Shipping Weight
AWH1250NPM	51-1/2"	34"	49"	59"	5-1/2"	5-1/2"	13-1/2"	6-3/4"	46-3/4"	5-3/4"	19-3/4"	23"	22-1/2"	1-1/2"	2-1/2"	6" OR 8"	6" OR 8"	1,519
AWH1500NPM	51-1/2"	34"	52-3/4"	62-3/4"	4-1/2"	4-1/2"	13-1/2"	6-3/4"	46-3/4"	5-3/4"	19-3/4"	23"	22-1/2"	1-1/2"	2-1/2"	6" OR 8"	6" OR 8"	1,672
AWH2000NPM	51-1/2"	34"	65-1/2"	75-1/2"	7"	5-3/4"	14-3/4"	7-1/4"	46-3/4"	6-3/4"	18-3/4"	23"	23-1/2"	1-1/2"	2-1/2"	8"	8"	1,931
AWH3000NPM	67-1/4"	48-1/4"	79-3/4"	93-3/4"	4-3/4"	6-3/4"	17-3/4"	8-3/4"	60-1/4"	8-1/2"	25-1/2"	29-1/2"	40"	2"	4"	10"	10"	3,147
AWH4000NPM	67-1/4"	48-1/4"	96"	110"	5"	7-1/2"	17-3/4"	8-3/4"	60-1/4"	8-1/2"	25-1/2"	29-1/2"	40"	2-1/2"	4"	12"	12"	3,694

## STANDARD FEATURES

- > 98% Thermal Efficiency
- > ENERGY STAR
- > CON-X-US Remote Connect
- > Indoor or Outdoor Models
- > Modulating Burner with 5:1 Turndown
- > Direct-Spark Ignition
- > Low NOx Operation
- > Sealed Combustion
- > Low Gas Pressure Operation
- > Vertical & Horizontal Vent Termination
- > Category IV Venting up to 150 Feet
- > PVC, CPVC, Polypropylene or AL29-4C Vent Material
- > ASME Stainless Steel Heat Exchanger
- > Gasketless Design
- > 160 psi Working Pressure
- > On/Off Switch
- > Adjustable High Limit with Manual Reset
- > High and Low Gas Pressure Switches
- > Flow Switch
- > Inlet & Outlet Temperature Sensors
- > Temperature & Pressure ASME Relief Valve
- > Zero Clearance to Combustible Material
- > Approved for Combustible Floor Installation
- > 1 Year Warranty on Parts
- > 5 Year Limited Warranty (see warranties for details)

## STANDARD PUMPS, ALL BRONZE

- > AWH1250 / 1 HP, 120V, 1 Phase
- > AWH1500 / 1 HP, 120V, 1 Phase
- > AWH2000 / 2 HP, 208V, 3 Phase
- > AWH3000 / 5 HP, 208V, 3 Phase
- > AWH4000 / 5 HP, 480V, 3 Phase

## SMART TOUCH™ FEATURES

- > SMART TOUCH™ Operating Control
- > Full-Color Touchscreen LCD Display
- > Built-in Cascading Sequencer for up to 8 Water Heaters
- > Building Automation System Integration with 0-10 VDC Input
- > Password Security
- > Low Water Flow Safety Control & Indication
- > Inlet & Outlet Temperature Readout
- > Freeze Protection
- > Service Reminder
- > Time Clock
- > Data Logging
- > Hours Running
- > Ignition Attempts
- > Last 10 Lockouts
- > Programmable System Efficiency Optimizers
- > Night Setback
- > Water Heater Pump Control
- > Building Recirculation Pump Control
- > 120 VAC / 60 Hertz / 1 Phase Power Supply (AWH1250-1500)
- > 208 VAC / 60 Hertz / 3 Phase Power Supply (AWH2000-3000)
- > 480 VAC / 60 Hertz / 3 Phase Power Supply (AWH4000)
- > High Voltage Terminal Strip
- > Low Voltage Terminal Strip
- > 24 VAC Auxiliary Device Relay
- > Auxiliary Proving Switch Contacts
- > Alarm on Any Failure Contacts
- > Pump Contacts
- > Runtime Contacts

- > Tank Thermostat Contacts
- > Tank Sensor Contacts
- > Cascade Contacts

## OPTIONAL EQUIPMENT

- > Alarm Bell
- > Condensate Neutralization Kit
- > SMART TOUCH PC Software
- > Modbus or BACnet MSTP Communications
- > BMS Gateway to LonWorks or BACnet IP
- > Indoor to Outdoor Kits
- > Outdoor to Indoor Kits

## CODES & REGISTRATIONS

- > ANSI Z21.10.3 compliant (AWH1250-2000)
- > ASME certified, "HLW" stamp (AWH1250-2000)
- > ANSI Z21.13 compliant (AWH3000-4000)
- > ASME certified, "H" stamp (AWH3000-4000)
- > California Code compliant
- > Massachusetts Code compliant
- > South Coast Air Quality Management District registered (AWH1250-2000)

### Model Number Guide

AWH	1500	N	PM
Armor Water Heater	Btu/Hr Input	Natural Gas	Pump Mounted

Armor Water Heater,  
1,500,000 Btu/hr input,

Natural Gas

PM Pump Mounted



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LOW LEAD CONTENT

H

HLW