

## Technical Data Sheet

# Innovation (600N-1350N) Water Heaters

The AERCO Innovation Water Heater utilizes state-of-the-art technology to easily meet highly diverse, demanding commercial and industrial hot water requirements in a compact and reliable condensing design.

The durable, highly reliable AERguard™ stainless steel helical firetube heat exchanger assembly is thermal shockproof and scale resistant for extended life. The all stainless steel construction maximizes longevity in the condensing application and the corrugated tubes increase effective heat transfer surface area for optimal thermal efficiencies. Enhanced waterside flow distribution maintains constant minimum velocities across the heat exchanger; this keeps solids in suspension and greatly reduces scale dropout to maintain high efficiency performance and long life.

The Innovation provides safe, instant hot water while mitigating the risks of Legionella and scalding due to lower set points, continual circulation and minimum water storage as buffer.

The advanced Edge [i] Controller incorporates dynamic feed-forward sensing for precise modulation of its high turndown air/fuel delivery system. The Edge fires the unit to accurately match load requirements and produce tight hot water outlet temperature control. Edge includes onboard multi-unit sequencing logic for up to 16 units, eliminating a need for separate sequencing panel. Wasteful overshooting and cycling are virtually eliminated as is the need for storage tanks, mixing valves and other temperature averaging components in most applications.

The set point is adjustable from 10° to 88°C and control to  $\pm 2.2^\circ\text{C}$  is easily achieved. Sidewall, through-the-roof, and ducted combustion capabilities provide broad installation flexibility. The small footprint, doorway size and quiet operation make it ideal for retrofit. With its tight temperature control, high efficiency, reliability and longevity the AERCO Innovation is truly a unique and advanced design.



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## Features

- Precise temperature control  $\pm 2.2^\circ\text{C}$
- Advanced Edge [i] Controller with 11.4 cm touchscreen
- Integrated Water Heater Management (WHM) multi-unit sequencing (up to 16 units)
- Fully modulating
- Condensing design
- AERguard stainless steel heat exchanger assembly
- Compact, space efficient design
- Natural gas or Propane
- Outlet water temperature of 10° to 88°C
- UL, cUL listed for closet installation on combustible flooring
- 11 bar [110 kPa] ASME Working Pressure Certified
- Direct or conventional vent with PVC, CPVC, PP, or AL29-4C materials
- Whisper quiet operation
- Remote alarm contacts
- Ducted combustion air capable
- UL, cUL listed, FM compliant, ASME section IV (HLW) stamped

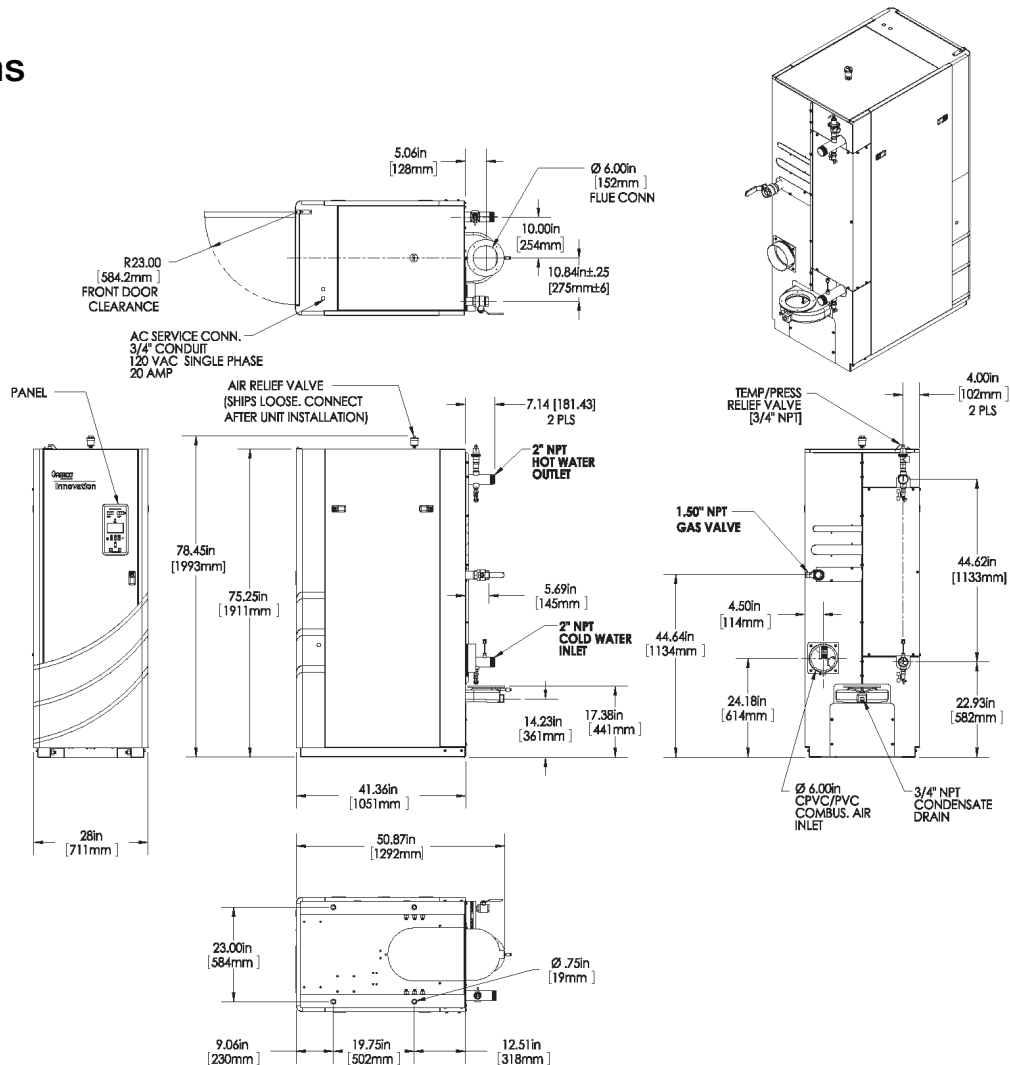
# Recovery Capacity\*

Innovation 600 (INN 600N)									
Temperature Rise (°C)	33.3	38.9	44.4	50.0	55.6	61.1	66.7	72.2	77.8
Flow [LPS]	1.2	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.5
Flow [LPH]	4383.5	3747.6	3293.3	2907.2	2634.6	2384.8	2180.4	2021.4	1885.1
Innovation 800 (INN 800N)									
Temperature Rise (°C)	33.3	38.9	44.4	50.0	55.6	61.1	66.7	72.2	77.8
Flow [LPS]	1.6	1.4	1.2	1.1	1.0	0.9	0.8	0.8	0.7
Flow [LPH]	5837.1	4996.7	4383.5	3883.8	3497.7	3179.7	2907.2	2702.8	2498.4
Innovation 1060 (INN 1060N)									
Temperature Rise (°C)	33.3	38.9	44.4	50.0	55.6	61.1	66.7	72.2	77.8
Flow [LPS]	2.1	1.8	1.6	1.4	1.3	1.2	1.1	1.0	0.9
Flow [LPH]	7722.2	6632.0	5814.4	5155.7	4633.3	4224.5	3861.1	3565.9	3316.0
Innovation 1350 (INN 1350N)									
Temperature Rise (°C)	33.3	38.9	44.4	50.0	55.6	61.1	66.7	72.2	77.8
Flow [LPS]	2.8	2.4	2.1	1.8	1.7	1.5	1.4	1.3	1.2
Flow [LPH]	9902.6	8494.5	7449.7	6609.3	5950.7	5405.6	4951.3	4587.9	4247.2

\*In condensing mode <610m above sea level

## Dimensions

Inches [mm]



# Specifications

	INN 600N	INN 800N	INN 1060N	INN 1350N
Adjustable Temperature Control	10° C to 88°C			
Ambient Temperature	-18°C to 54°C			
Accuracy	±2.2°C			
Input	183 kW	234 kW	311 kW	396 kW
Certified Efficiency (DOE 10 CFR Part 431)	93%	94%	95%	96%
Turndown Ratio (up to)	12:1	16:1	21:1	27:1
Flue and Air Intake	152.4 mm Diameter 101.6 mm Diameter Optional	152.4 mm Diameter		
Flue Material (per local code)	PVC, CPVC, PP or AL29-4C			
Water Inlet and Outlet	50.8 mm NPT Male			
Gas Connection - Natural Gas	38.1 mm NPT Male			
Gas Pressure Requirements (Nat. Gas and Propane)	35.0 mbar [3.5 KPa] Max			
	Nat. Gas: 10 mbar [1.0 KPa] Minimum @ Full Load / Propane: 27.5 mbar [2.7 KPa] Minimum @ Full Load			
Maximum Continuous Water Flow	3.15 LPS			
Condensate Connection	19.05 mm NPT Female			
Maximum Condensate Flow	17 LPH	23 LPH	30 LPH	42 LPH
Pressure Rating	11 bar [1100 kPa] @ 99°C			
NOx Emissions Certifications	SCAQMD, TCEQ			
Standard Listing and Approvals	UL, cUL, ASME, (HLW)			
Gas Train Options	FM Compliant			
Electrical Requirements	220VAC, Single Phase, 50/60 Hz 20 Amp [11 FLA]			
Water Pressure Drop @ 0.95 LPS	86.2 mbar [8.6 kPa]			
Water Pressure Drop @ 1.89 LPS	137.9 mbar [13.8 kPa]			
Water Volume	95.8 liters	92.0 liters	83.3 liters	75.3 liters
Weight, Installed	445 kg (dry), 545 kg (wet)	445 kg (dry), 545 kg (wet)	454 kg (dry), 540 kg (wet)	476 kg (dry), 554 kg (wet)
Weight Shipping	490 kg	490 kg	499 kg	522 kg



Heating and Hot Water Solutions

AERCO International, Inc. • 100 Oritani Drive • Blauvelt, NY 10913  
USA: T: (845) 580-8000 • Toll Free: (800) 526-0288 • AERCO.com