

iN199 | iN199A Submittal Data

Date:	<input type="text"/>	Bid Date:	<input type="text"/>
Project Name:	<input type="text"/>	Fuel Type:	<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane
Project #:	<input type="text"/>	Factory Option:	<input type="checkbox"/> Propane Setup
City State Zip:	<input type="text"/> <input type="text"/> <input type="text"/>		
Engineer:	<input type="text"/>		
Contractor:	<input type="text"/>		

Operational Modes	Temperature Rise (ΔT) °F											
	30	40	45	50	60	70	80	90	100	120	130	140
Flow (GPM)	13.1	9.8	8.7	7.9	6.6	5.6	4.9	4.4	3.9	3.3	3.0	2.8
Flow (GPH)	787	590	525	472	393	337	295	262	236	197	182	169



KEY FEATURES

- 199,950 BTU/hr
- Drop-In Ready Replacement
- Quick Ship
- Sizing Guarantee
- Gas Pressure Sensor (Ease of Ignition Troubleshooting)
- Water Pressure Sensor (Pressure & Scaling Check)
- Cellular Connectivity
- Control Board OTA Software Updates
- Automatic Pump Control (Prevents Pump Burnout)
- Lightweight - 266 LBS
- **iN199A** - ASME Certified

PERFORMANCE

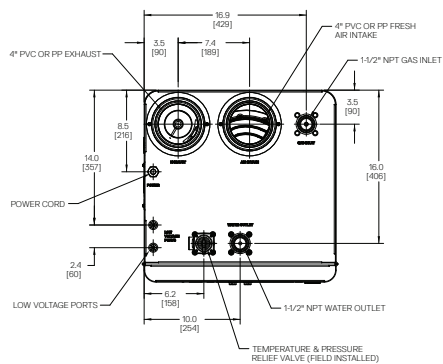
- Turndown Ratio of 7:1 per unit.
- Cascade up to 4 units with common venting for a total of 800MBH and a 27:1 total turndown ratio



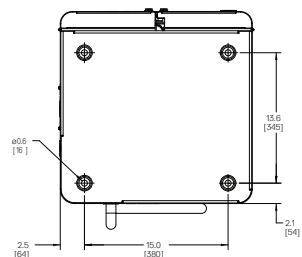
iN199 | iN199A Specifications

PARAMETER	MODELS
	iN199 iN199A
Type	Indoor, Floor Mounted, On-Demand Water Heater
Fuel	Preset for NG / LP convertible without additional parts
Minimum Input (BTU/hr)	30,000
Maximum Input (BTU/hr)	199,950
Maximum Output (BTU/hr)	195,951
Thermal Efficiency	98%
Turn Down Ratio (TDR)	7:1
Water Inlet / Outlet Connections	1-1/2" NPT
Gas Inlet Connection	3/4" NPT
Condensate Drain Connection	3/4" NPT panel mount
Maximum Condensate Flow Rate (GPH)	3.6
Unit Dimensions H X W X D (Inches)	67.5 X 20 X 20 (15 CU. FT)
Service Clearances	4" on the back, 6" on the top, 21" on the front, and 6" on the sides
Unit Weight (LBS)	266 LBS
Shipping Crate Dimensions H X W X D / Weight	85 X 29.5 X 27 (Inches) / 366 (LBS)
Venting Type	Direct Vent (2 pipe - intake & exhaust), Power Vent (1 pipe - exhaust only, room air)
Venting Materials (USA)	Sch. 40 PVC, Sch. 80 CPVC, Polypropylene, Stainless Steel
Venting Materials (Canada)	Type BH Gas Vent Classes: II A (PVC), II B (CPVC), II C (Polypropylene), I (AL 29-4C SS)
Vent Size (Diameter)	3" Ø
Max Vent Length - Single Pipe / Power Vent*	195 FT
Max Vent Length - Two Pipe / Direct Vent*	95 FT
* Venting Note: From the maximum lengths above, deduct 5 ft. per 90° elbow and 2 ft. per 45° elbow	
Ignition	Electronic Spark Ignition
Temperature Range	100°F – 190°F
Temperature Stability	+/- 4°F (During Demand)
Installation Location Ambient Temperature	40°F – 130°F
Safety	Flame Rod, Thermal Fuse, Overheat Prevention Device, Fan Speed Monitor, Flue Temperature Monitor, Blocked Vent Detector, Dual Flame Sensing
Water Pressure Min / Max (PSIG)	30 / 150 30 / 160
NG/LP - Min. Dynamic Gas Pressure (Full Fire)	2.5" WC (set Gas regulator to 8" WC for NG 11" WC for LP)
NG/LP - Maximum Static Gas Pressure	14" WC (set Gas regulator to 8" WC for NG 11" WC for LP)
Gas Regulator Pressure Set To	8" WC for NG, 11" WC for LP
Electrical	120V AC, 60 Hz
Power Consumption	Max 9 Amps, 10W (Standby)
Internal Water Volume (gallons)	1
Features	iN199 iN199A
Cascading	Masterless, 4 units, Automatic Rotation, Cascadable with iN199 ONLY
Common Venting	Yes - up to 4 units
Heat Exchanger	Expandable, Stainless 316L
Listing	ETL (Z21.10.3 / CSA 4.3) ETL (Z21.10.3 / CSA 4.3), ASME HLW
Performance GPM / GPH	iN199 iN199A
Hot Water Capacity (30F Rise)	13.1 / 787
Hot Water Capacity (40F Rise)	9.8 / 590
Hot Water Capacity (45F Rise)	8.7 / 525
Hot Water Capacity (50F Rise)	7.9 / 472
Hot Water Capacity (60F Rise)	6.6 / 393
Hot Water Capacity (70F Rise)	5.6 / 337
Hot Water Capacity (80F Rise)	4.9 / 295
Hot Water Capacity (90F Rise)	4.4 / 262
Hot Water Capacity (100F Rise)	3.9 / 236
Hot Water Capacity (120F Rise)	3.3 / 197
Hot Water Capacity (130F Rise)	3.0 / 182
Hot Water Capacity (140F Rise)	2.8 / 169
Warranty	Heat Exchanger Coil – 6 years, All Other Parts – 1 year

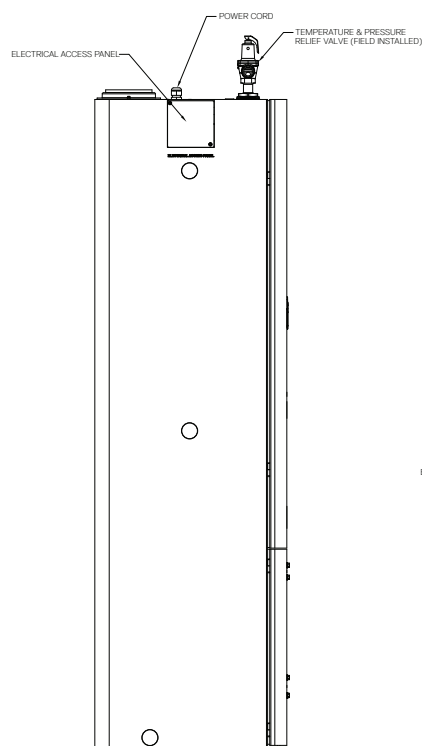
iN199/iN199A Dimensional Specifications



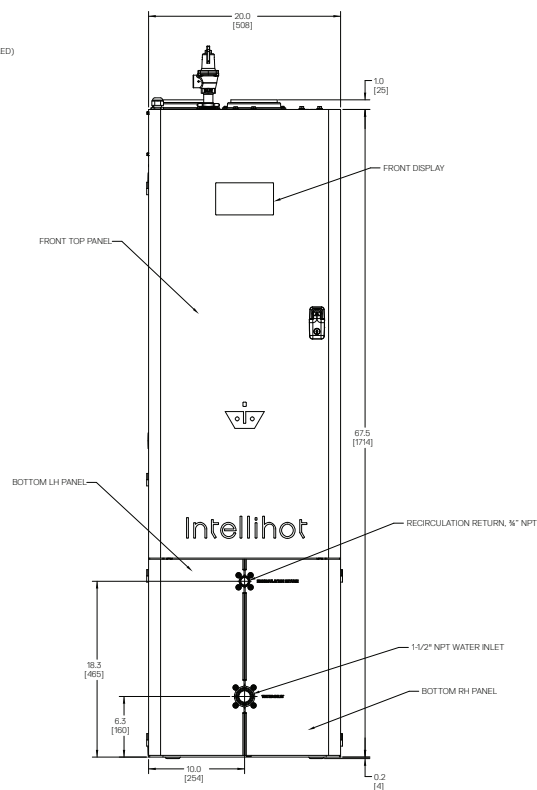
TOP VIEW



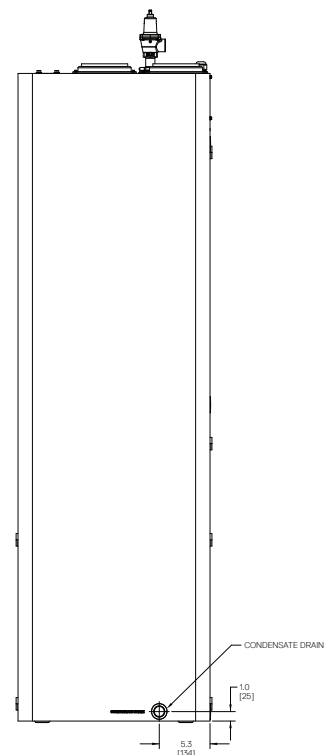
BOTTOM VIEW



SIDE VIEW



FRONT VIEW

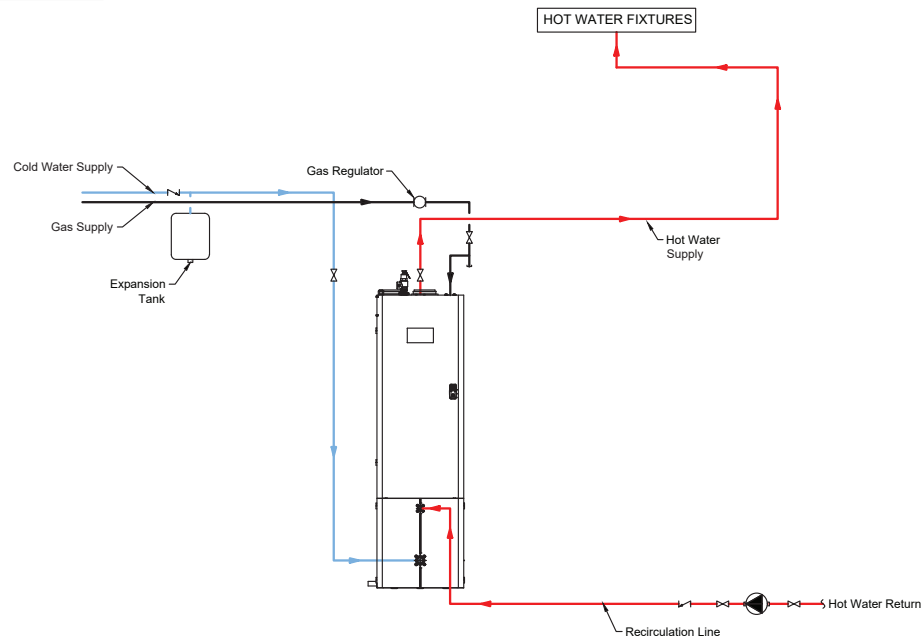


REAR VIEW

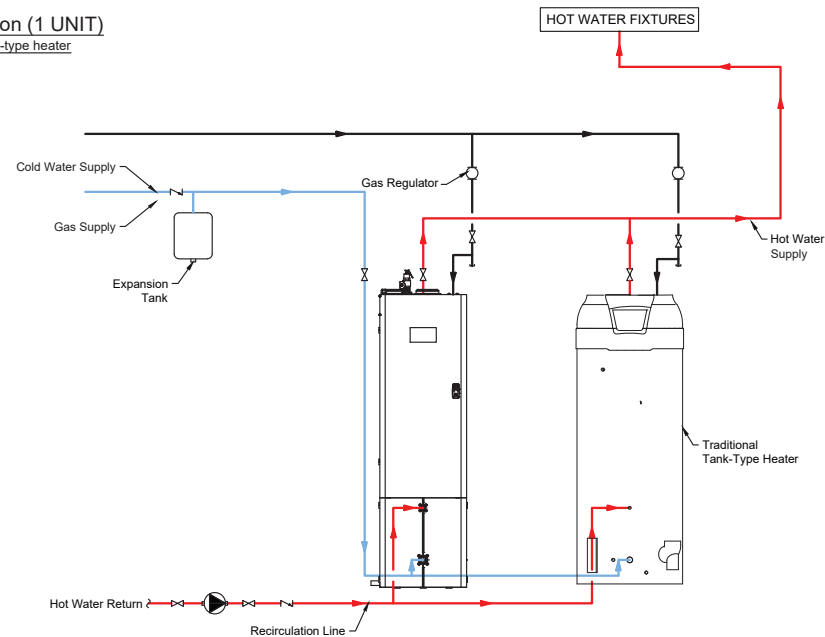


iN199/iN199A Configuration Options

Neuron (1 UNIT)

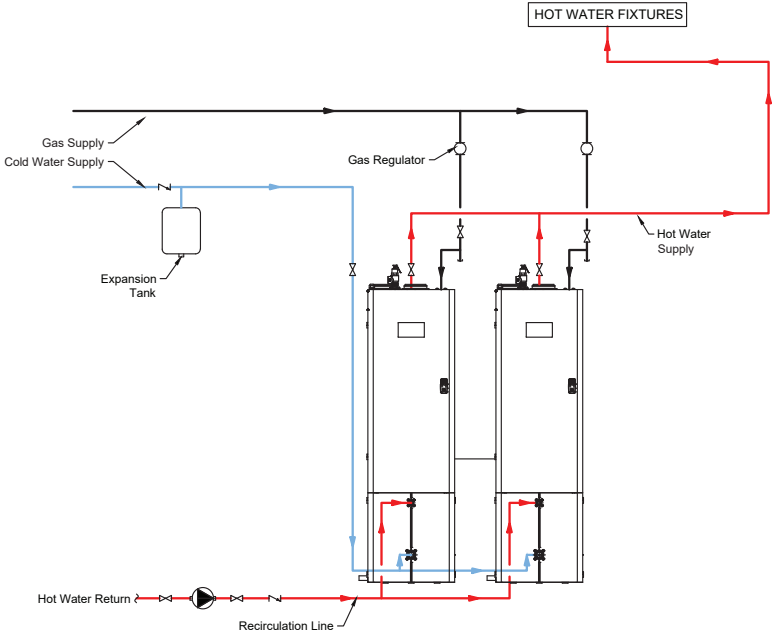


Neuron (1 UNIT)
w/ tank-type heater

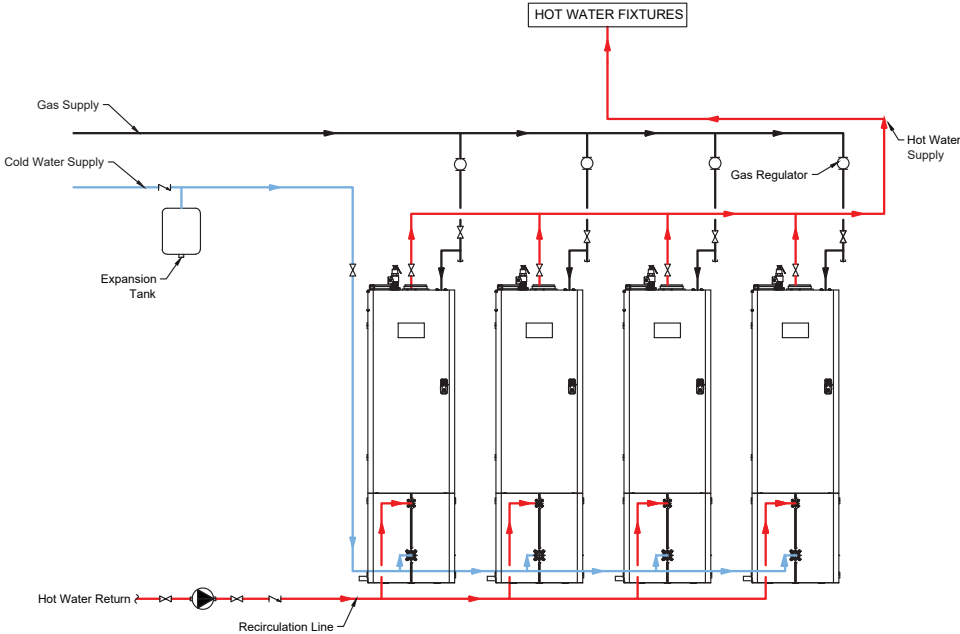


iN199/iN199A Configuration Options

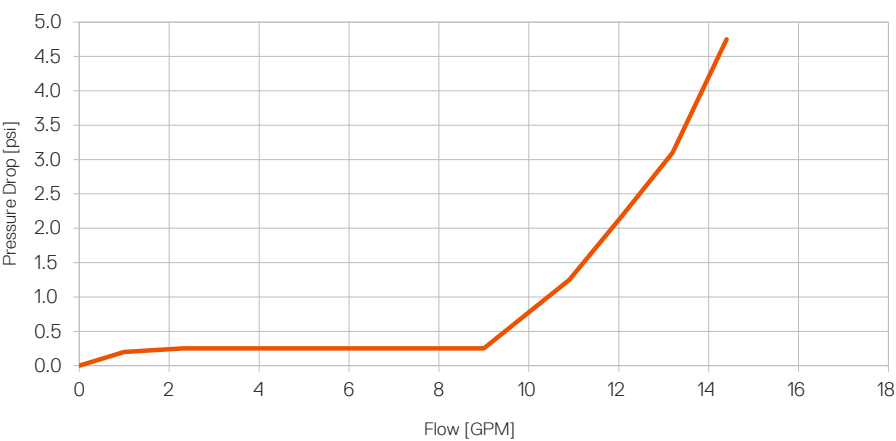
Neuron (2 UNIT)



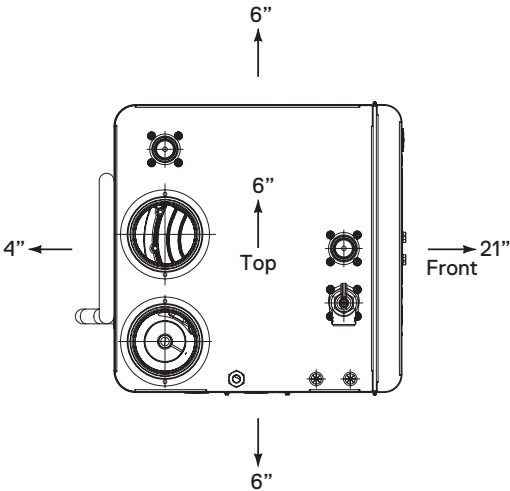
Neuron (4 UNIT)



iN199/iN199A Pressure Drop, Cascading Support & Clearance Requirements



Neuron Cascading	
Model (Max. Number of Cascaded Units)	iN199 iN199A
iN199 iN199A	Yes (Max. 4 Units)
All Other Models: i200, i250, iQ251, iQ251D, iN401, iN501, iQ751, iQ1001, iQ1501, iQ2001, and iQ3001	Not Supported



Location	Required		Recommended
	From Combustibles	From Non-Combustibles	Service Clearance ¹
Top	6" (152 mm)	2" (50.8 mm)	6" (152 mm)
Back	5/8" (15.8 mm)	5/8" (15.8 mm)	4" (10 cm)
Sides	1" (25.4 mm)	1/2" (12.7 mm)	6" (152 mm)
Front	2" (51 mm)	2" (50.8 mm)	21" (53 cm)
Bottom	0" (0 mm)	0" (0 mm)	0" (0 mm)

¹ Service clearances are recommended dimensions to allow for normal service of the unit.

Service Clearances: If multiple units are installed, perform electrical connections first before making all other connections (gas, water, supply air, exhaust, and condensate). This will enable the above mentioned 6" side to side clearances.



iN199/iN199A Venting

Maximum Pipe Length in Feet				
Number of Units	Venting Type			
		3" Diameter	4" Diameter	6" Diameter
		iN199 iN199A	iN199 iN199A	iN199 iN199A
1	1 Pipe	195	250	250
	2 Pipe	95	125	125
2	1 Pipe	55	228	250
	2 Pipe	28	114	125
3	1 Pipe	-	110	250
	2 Pipe	-	55	125
4	1 Pipe	-		250
	2 Pipe	-		125

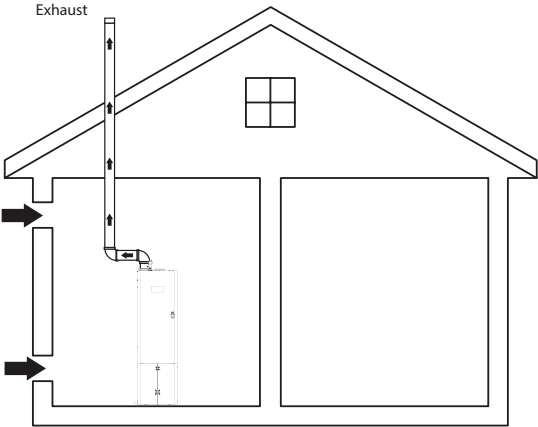
1 Pipe - Only exhaust out pipe is connected and the combustion air intake is from within the room. For example, one iN401 with a 4" diameter, the maximum exhaust pipe length for 1 pipe is 250 feet.

2 Pipes - Both the Combustion air intake and the exhaust pipe are connected. In this case, the table specifies the maximum length per pipe. For example, one iN401 with 4" diameter, 125 feet maximum is allowed for combustion air intake pipe and exhaust out pipe. The 125 feet maximum is per pipe.

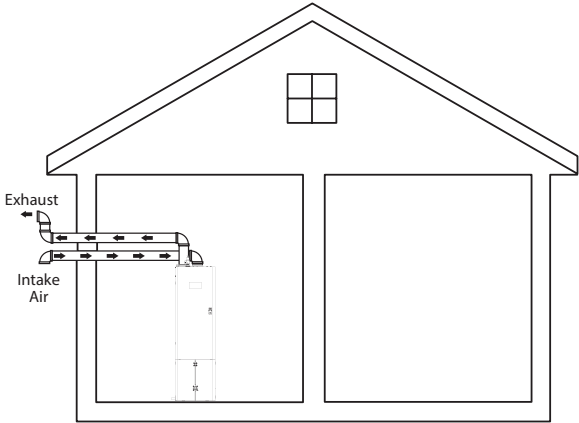
Note:

1. Reduce the maximum equivalent length above by 5 feet per 90° elbow used and by 2 feet per 45° elbow used. Do not exceed the above set limits.

2. If multiple units are common vented, then the units must be cascaded. Please refer to the combustion section for how to do combustion with common vented units.



1-Pipe



2-Pipe

iN199/iN199A Electrical Data

Electrical power required for the water heater is 120V AC, 60 Hz. The circuit breaker shall be sized for a power consumption of 15A (FLA). Larger breakers can be used for multiple units. Please ensure correct polarity of wiring before powering up unit.

