

iN501 Submittal Data

Date:		Bid Date:	
Project Name:		Fuel Type:	☐ Natural Gas ☐ Propane
Project #:		Factory Option:	☐ iNTouch-BMS
City State Zip:		Factory Option:	☐ Propane Setup
Engineer:			
Contractor:			

	Temperature Rise (ΔT) °F						
	40	50	60	70	80	90	100
Flow (GPM)	24.1	19.3	16.1	13.8	12.0	10.7	9.6



KEY FEATURES

- Multiple Stainless (316L) Heat Exchangers
- Flexible-Floating Design, stress-relieving and thermal shock resistant
- Built-in Redundancy - Multiple heat engines with individual controls
- Multi-Unit - Masterless cascading with common venting
- Gas Pressures - Operates on gas pressure range of 2.5"-14" w.c.
- ASME-HLW Compliant
- Designed and Built in the U.S.
- 7" Color Touch Screen - access to usage data, troubleshooting, and parts wear
- Direct Cell-LTE Connectivity

PERFORMANCE

- Turndown Ratio of 16.7:1 per unit.
- Cascade up to 4 units with common venting for a total of over 2,000MBH and a 67:1 total turndown ratio

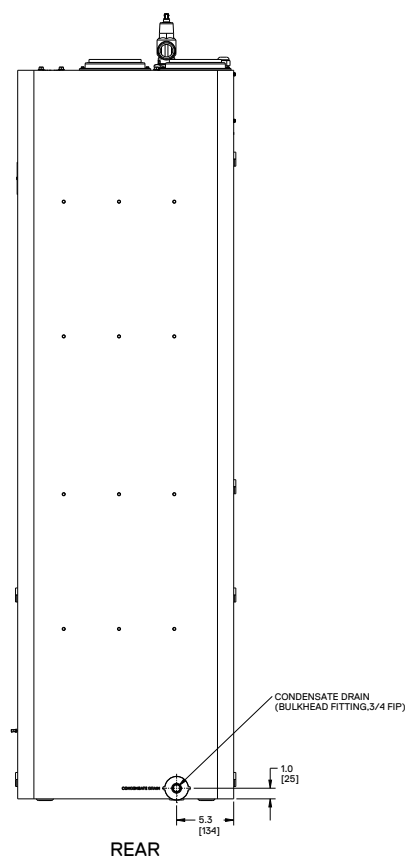
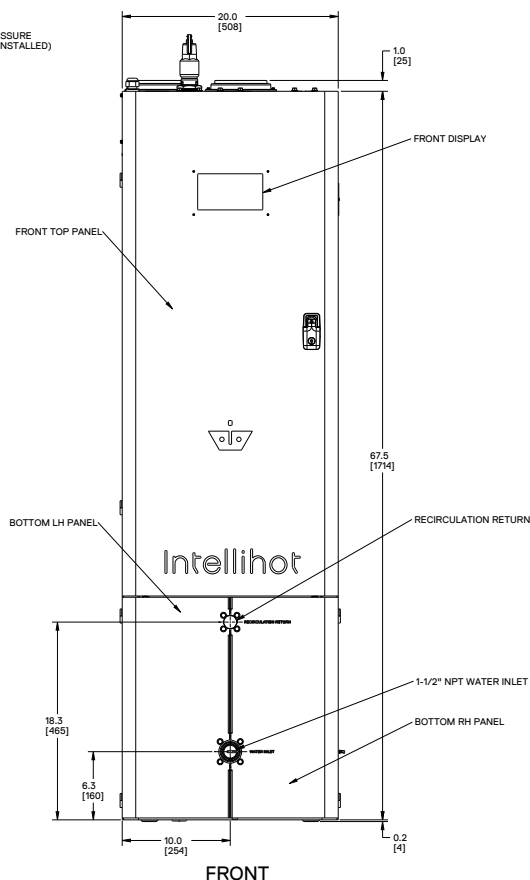
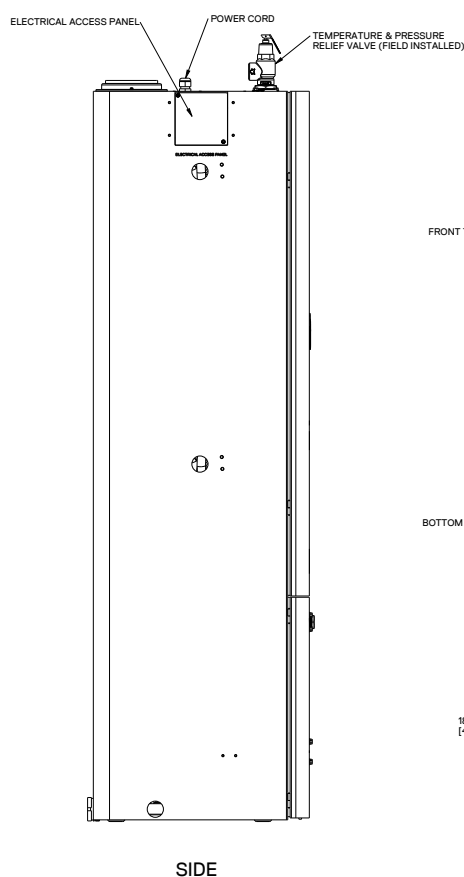
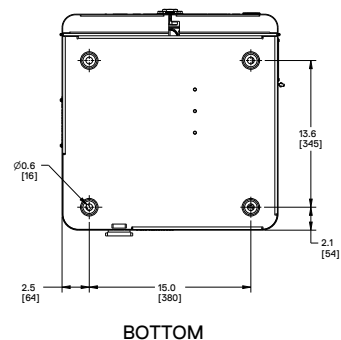
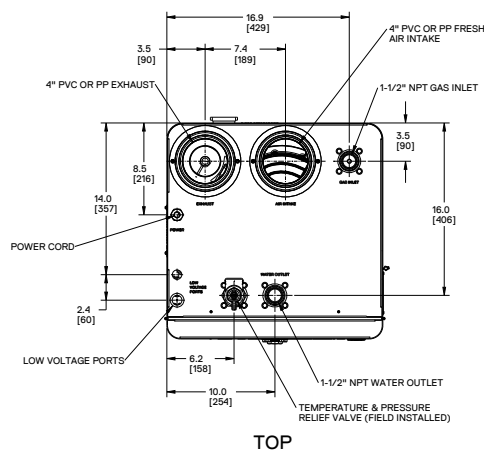


iN501 Specifications

PARAMETER	MODELS
	iN501
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)	499,999
Maximum Output (BTU/hr)	479,999
Thermal Efficiency	96%
Turn Down Ratio (TDR)	16.7:1
Water Inlet / Outlet Connections	1-1/2" NPT
Gas Inlet Connection	1-1/2" NPT
Condensate Drain Connection	3/4" FIP
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)	345 LBS
Shipping Crate Dimensions H X W X D / Weight	85 X 29.5 X 27 (Inches) / 445 (LBS)
Venting Type	Direct Vent (2 pipe - intake & exhaust), Power Vent (1 pipe - exhaust only, room air)
Exhaust Venting Materials (USA)	Sch. 40 PVC, Sch. 80 CPVC, Polypropylene, Stainless Steel
Exhaust Venting Materials (Canada)	Type BH Gas Vent Classes: II A (PVC), II B (CPVC), II C (Polypropylene), I (AL 29-4C SS)
Exhaust/Air Intake Venting Size (Diameter)	4" Ø
Max Vent Length - Single Pipe / Power Vent*	180 FT
Max Vent Length - Two Pipe / Direct Vent*	90 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
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 / 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 9.5 Amps, 16W (Standby)
Internal Water Volume (gallons)	1
Features	iN501
Built-In Redundancy	Multiple Heat Engines with Individual Control
Cascading	Masterless, 4 units, Automatic Rotation
Common Venting	Yes - up to 4 units
Heat Exchanger	Expandable, Stainless 316L
Appliance Certification to ANSI Z21.10.3	ETL
SCAQMD	Ultra Low Nox (under 20 PPM)
ASME	HLW
Performance GPM	iN501
Hot Water Capacity (45F Rise)	21.4
Hot Water Capacity (70F Rise)	13.8
Hot Water Capacity (90F Rise)	10.7
Hot Water Capacity (100F Rise)	9.6
Hot Water Capacity (140F Rise)	6.9
Warranty	Heat Exchanger Coil – 10 years, All Other Parts – 2 years

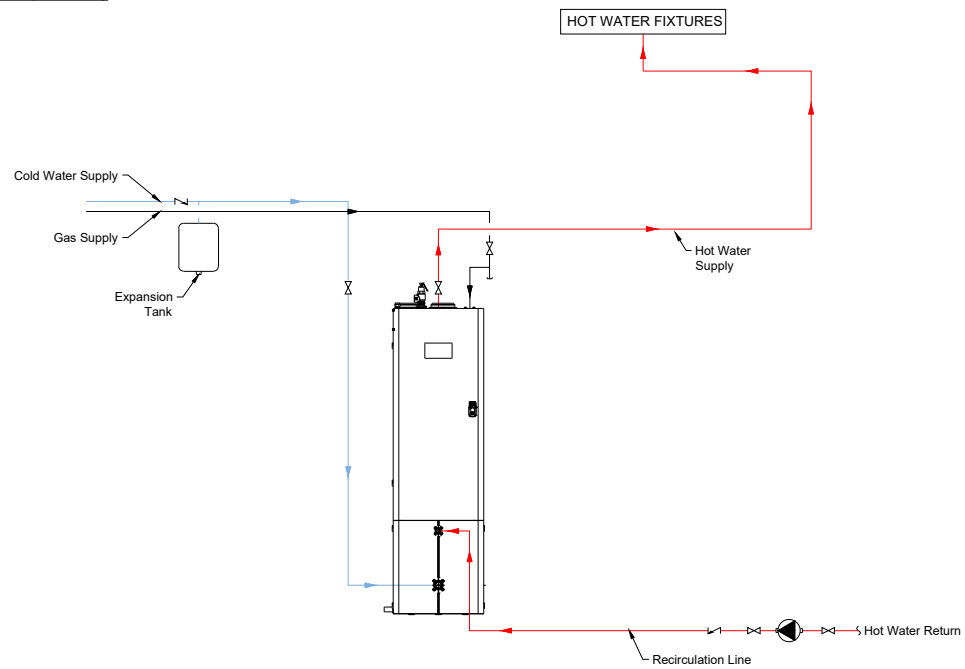


iN501 Dimensional Specifications

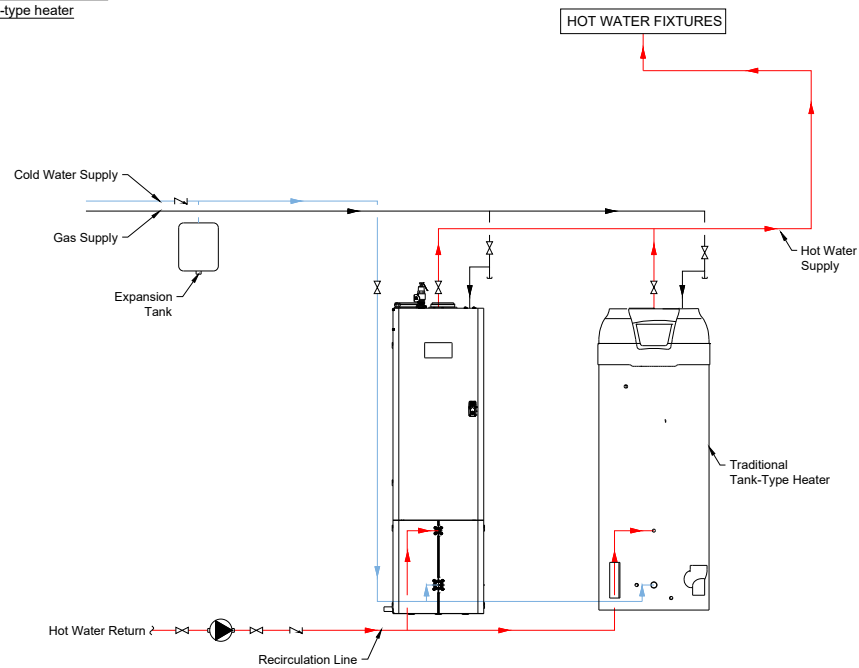


iN501 Configuration Options

Neuron (1 UNIT)

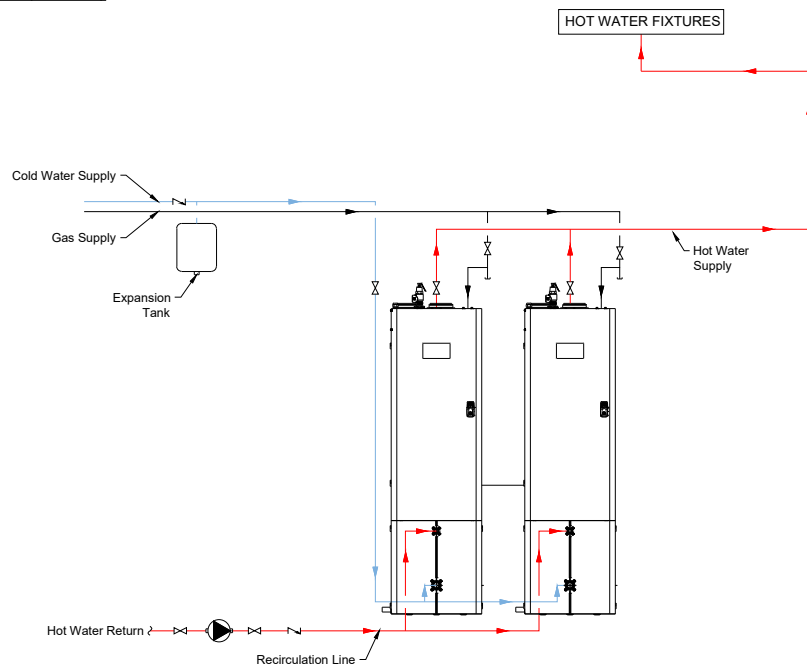


Neuron (1 UNIT)
w/ tank-type heater

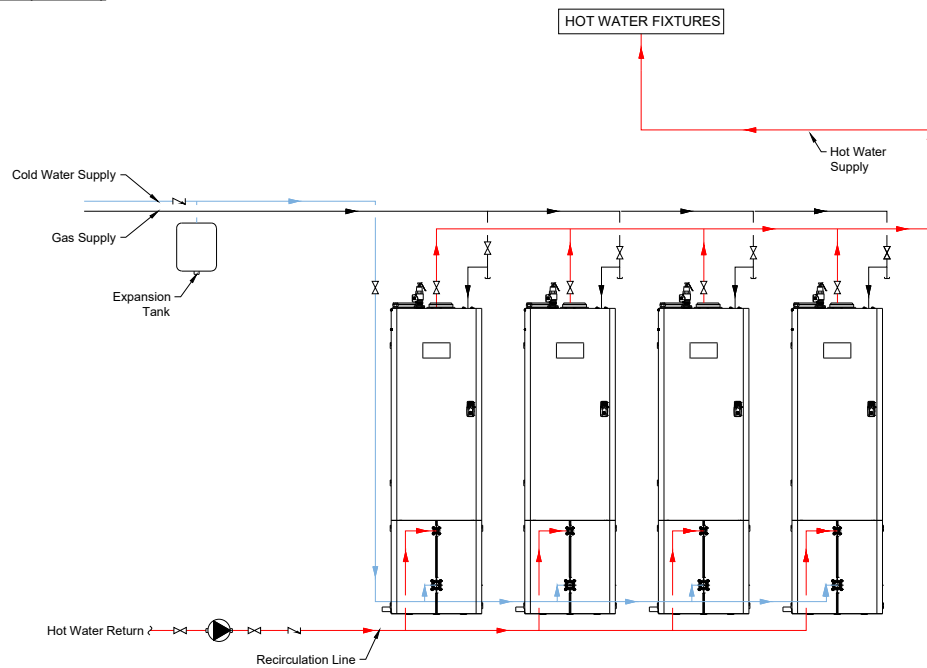


iN501 Configuration Options

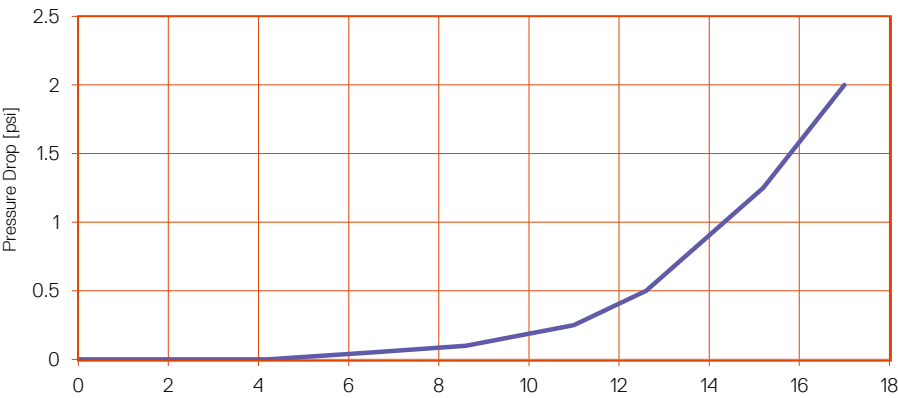
Neuron (2 UNIT)



Neuron (4 UNIT)



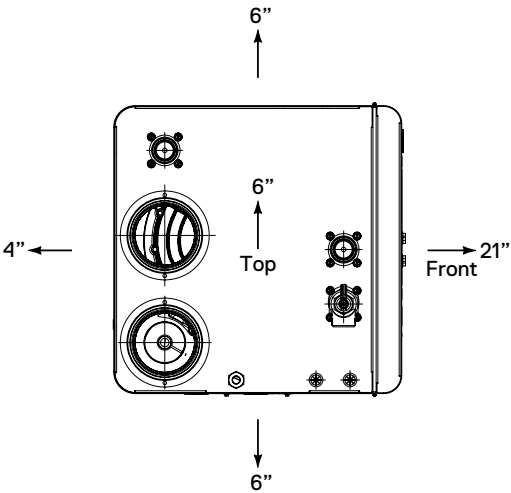
iN501 Pressure Drop, Cascading Support & Clearance Requirements



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

Location	Required		Recommended Service Clearance¹
	From Combustibles	From Non-Combustibles	
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.

iN501 Venting

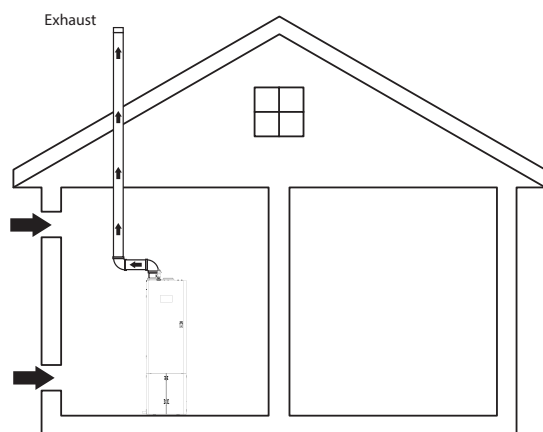
Maximum Pipe Length in Feet				
Number of Units	Venting Type	4" Diameter	6" Diameter	8" Diameter
		iN501	iN501	iN501
1	1 Pipe	180	250	250
	2 Pipe	90	125	125
2	1 Pipe	50	250	250
	2 Pipe	25	125	125
3	1 Pipe	-	176	250
	2 Pipe	-	88	125
4	1 Pipe	-	-	250
	2 Pipe	-	-	125

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.

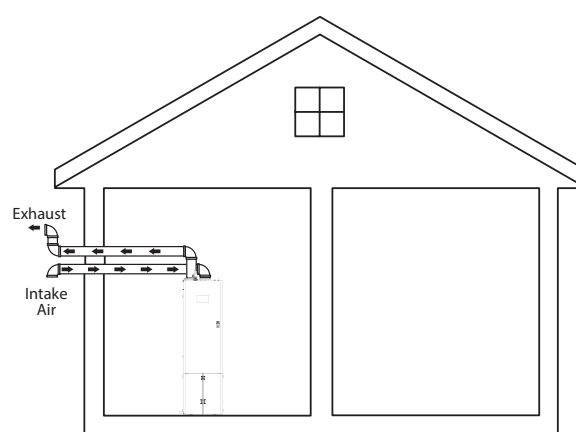
2 Pipes - Both the Combustion air intake and the exhaust pipe are connected. In this case, the table specifies the maximum length per pipe. For example, one iN401 with 4" diameter, 125 feet maximum is allowed for combustion air intake pipe and exhaust out pipe. The 125 feet maximum is per pipe.

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

iN501 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.