


# iN401 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"/> iNtouch-BMS
City   State   Zip:	<input type="text"/> <input type="text"/> <input type="text"/>	Factory Option:	<input type="checkbox"/> Propane Setup
Engineer:	<input type="text"/>		
Contractor:	<input type="text"/>		

	Temperature Rise ( $\Delta T$ ) °F						
	40	50	60	70	80	90	100
Flow (GPM)	19.3	15.4	12.9	11.0	9.6	8.6	7.7



## 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

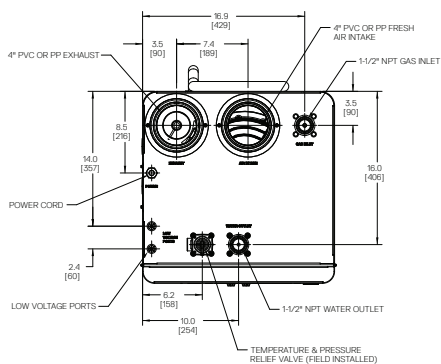
## PERFORMANCE

- Turndown Ratio of 13.3:1 per unit.
- Cascade up to 4 units with common venting for a total of over 1,600MBH and a 53:1 total turndown ratio

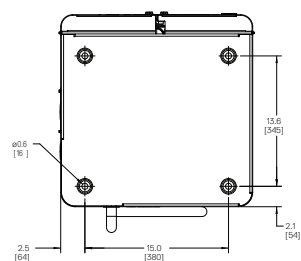
# iN401 Specifications

PARAMETER	MODELS
	iN401
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)	399,999
Maximum Output (BTU/hr)	383,999
Thermal Efficiency	96%
Turn Down Ratio (TDR)	13.3:1
Water Inlet / Outlet Connections	1-1/2" NPT
Gas Inlet Connection	1-1/2" NPT
Condensate Drain Connection	3/4" PVC
Maximum Condensate Flow Rate (GPH)	2.8
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)
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)	4" Ø
Max Vent Length - Single Pipe / Power Vent*	250 FT
Max Vent Length - Two Pipe / Direct Vent*	125 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	iN401
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
Listing	ETL (Z21.10.3 / CSA 4.3), ASME HLW
Performance GPM	iN401
Hot Water Capacity (45F Rise)	17.1
Hot Water Capacity (70F Rise)	11.0
Hot Water Capacity (90F Rise)	8.6
Hot Water Capacity (100F Rise)	7.7
Hot Water Capacity (140F Rise)	5.5
Warranty	Heat Exchanger Coil – 10 years, All Other Parts – 2 years

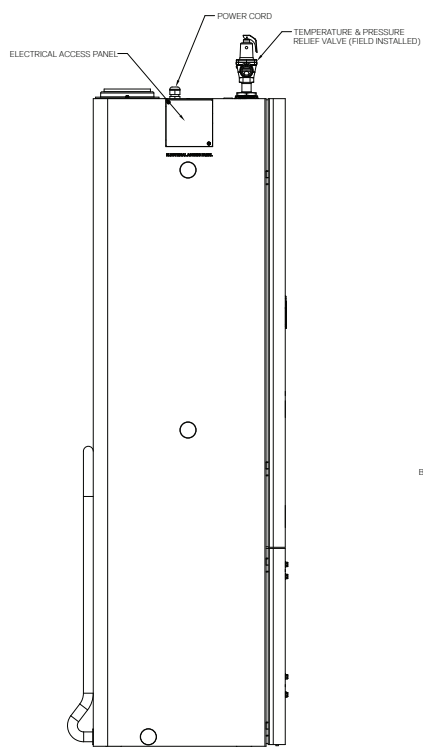
## iN401 Dimensional Specifications



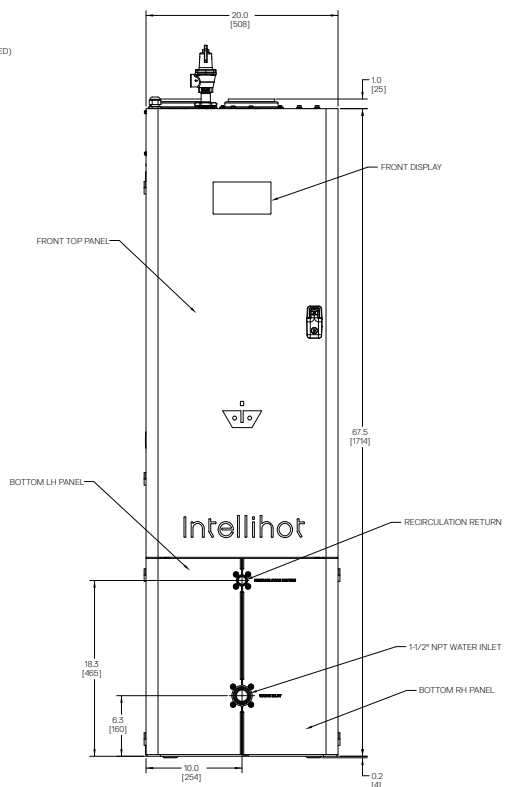
TOP VIEW



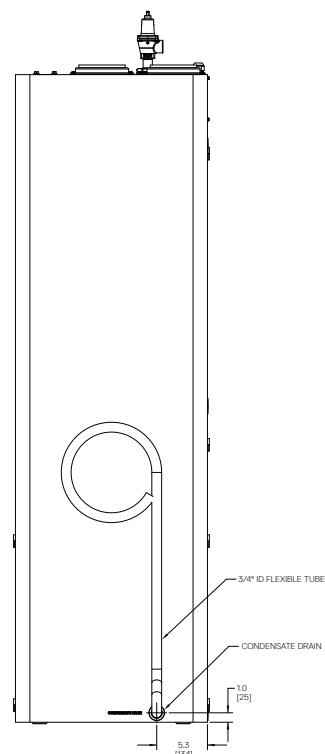
BOTTOM VIEW



SIDE VIEW



FRONT VIEW



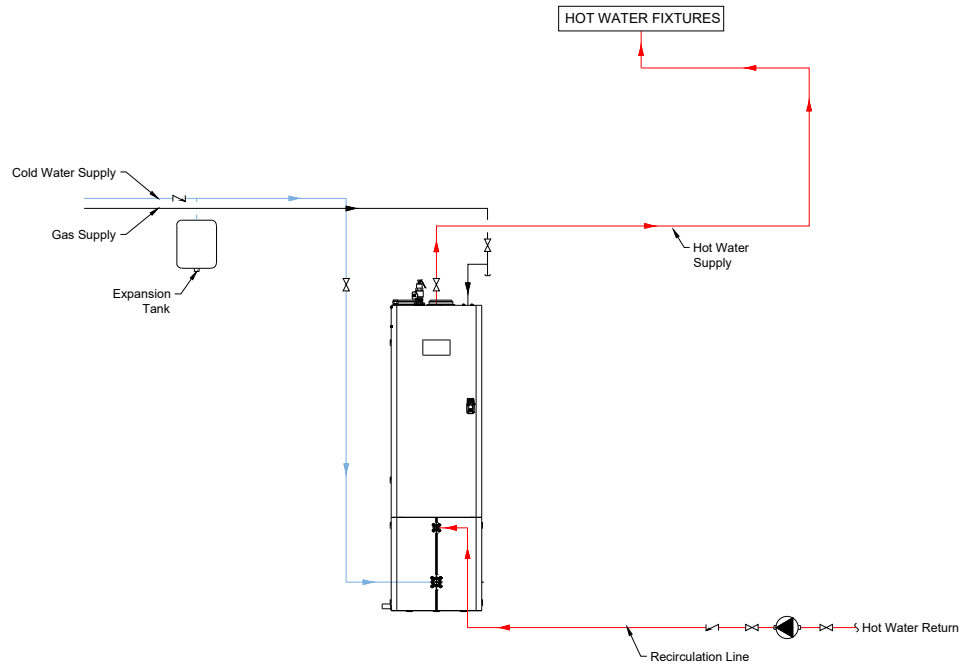
REAR VIEW



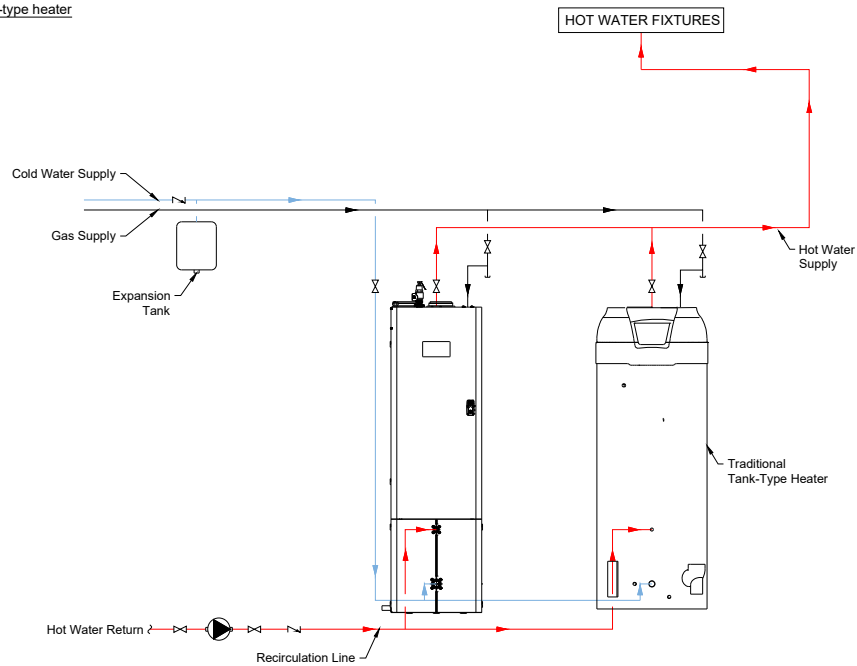
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## iN401 Configuration Options

Neuron (1 UNIT)



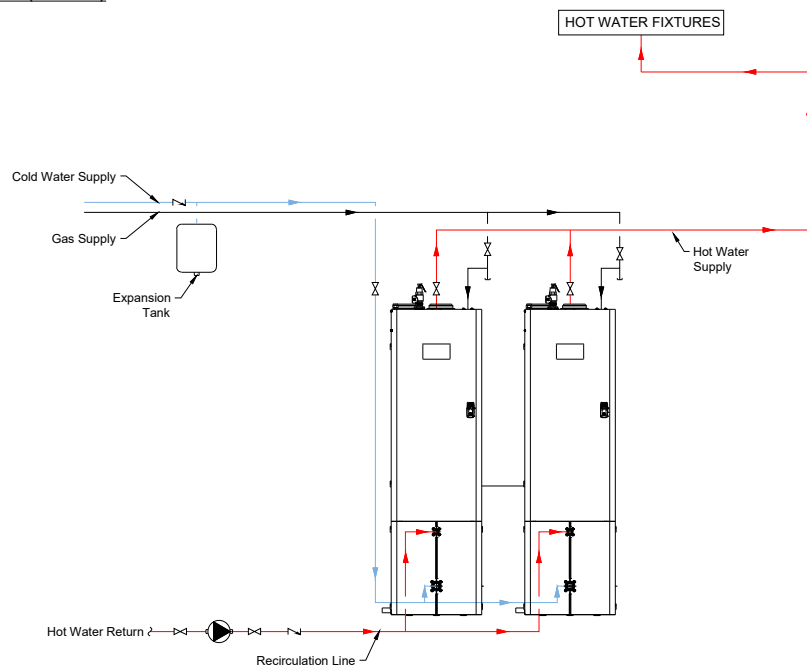
Neuron (1 UNIT)  
w/ tank-type heater



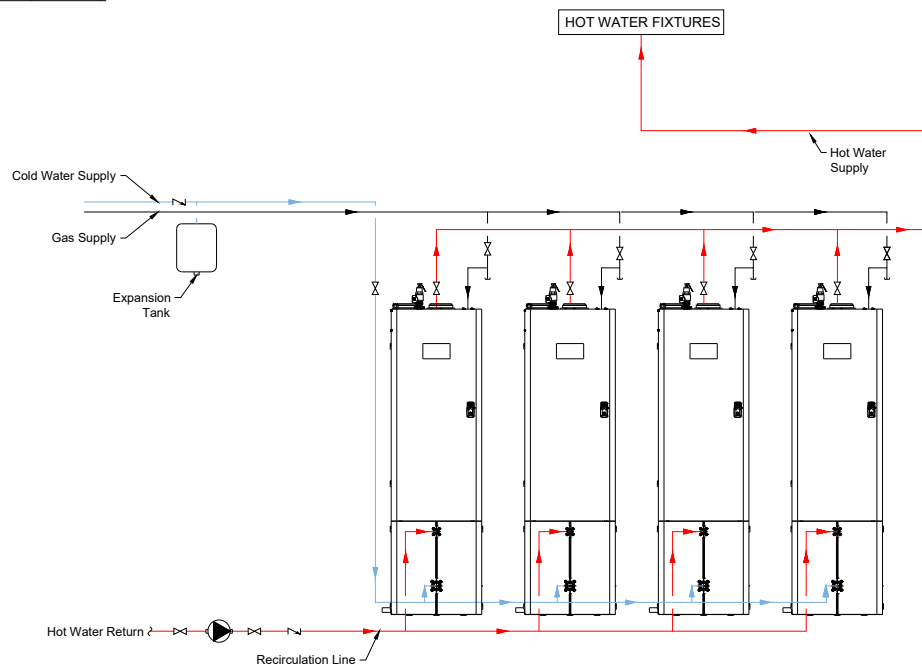
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## iN401 Configuration Options

### Neuron (2 UNIT)

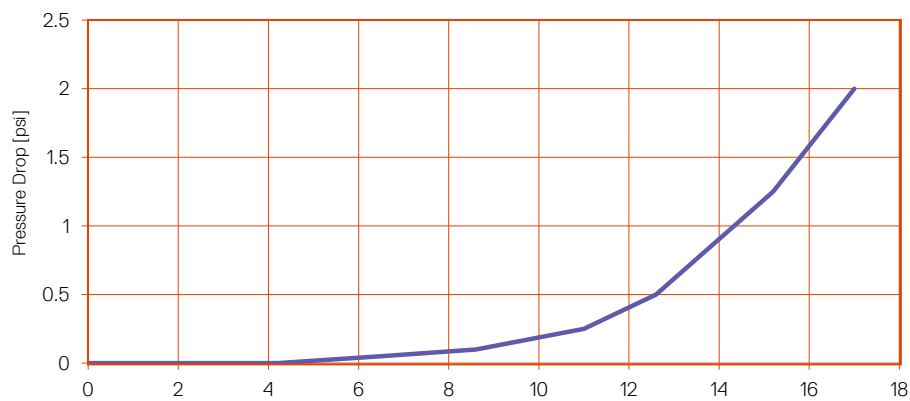


### Neuron (4 UNIT)

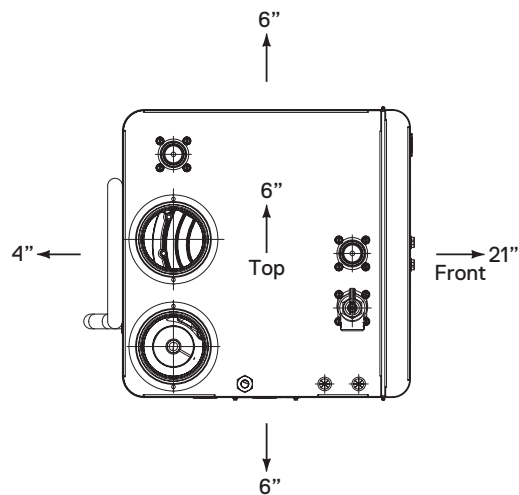


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# iN401 Pressure Drop, Cascading Support & Clearance Requirements



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 Clearance <sup>1</sup>
	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)

<sup>1</sup> 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.

## iN401 Venting

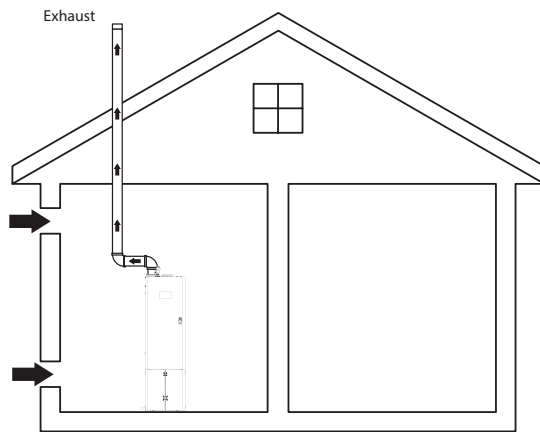
Maximum Pipe Length in Feet				
Number of Units	Venting Type	4" Diameter	6" Diameter	8" Diameter
		iN401	iN401	iN401
1	1 Pipe	250	250	250
	2 Pipe	125	125	125
2	1 Pipe	82	250	250
	2 Pipe	41	125	125
3	1 Pipe	40	250	250
	2 Pipe	20	125	125
4	1 Pipe	-	-	250
	2 Pipe	-	-	125

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.

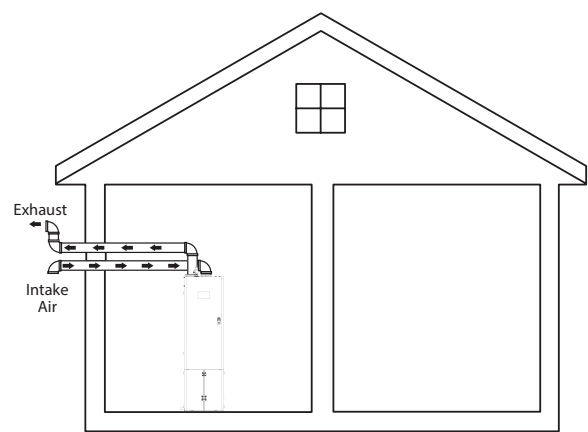
2 Pipes - Both the Combustion air intake and the exhaust pipe are connected. In this case, the table specifies the maximum length per pipe. For example, one iN401 with 4" diameter, 125 feet maximum is allowed for combustion air intake pipe and exhaust out pipe. The 125 feet maximum is per pipe.

### 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

## iN401 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.



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