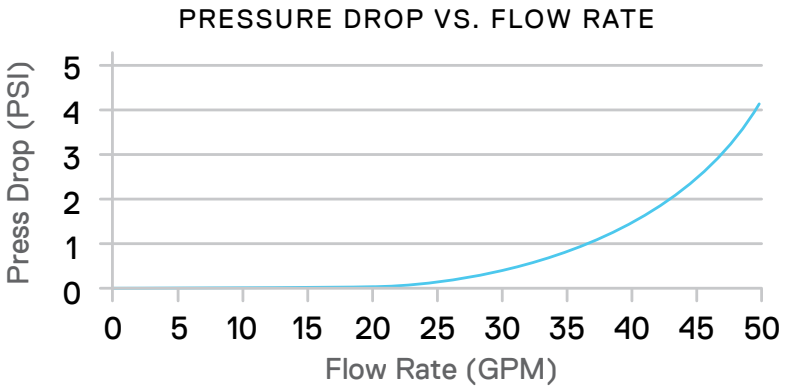
Commercial Tankless **iQ**1501, Gen II Submittal Data

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)	72.3**	57.9**	48.2**	41.3	36.2	32.1	28.9



KEY FEATURES

- 6 Weldless 316L Stainless Steel Heat Exchangers with Individual Controls for Masterless Cascading
- ASME-HLW Compliant | Designed & Built in the U.S.
- Factory monitoring via telliCare messaging.
- Turn Down Ratio 50:1 per Unit, Cascade Up to 4 Units for 200:1 Turndown

** These flow rates are intermittent, not continuous flow rates. Please refer to section 3.6 in the I/O Manuals.

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iQ1501 Short Spec & Accessories

The water heater shall be a direct fired tankless, fully condensing, water-tube design. The power burner shall have full modulation. The minimum firing rate shall not exceed 30,000 BTU/HR. The heat exchanger shall be constructed with 316L stainless steel helical water tube and be fully floating with no welded joints. The water heater control system shall incorporate onboard multi-unit sequencing logic that would allow masterless cascading without the need for a master controller. The heat exchangers shall sequence between each other, operating in parallel to meet the load. Each heat exchanger will default to individual control upon failure of the sequencing chain. Changes to operational parameters on any one of the heat exchangers will automatically adjust all other heat exchangers to the most recent parameter change. The water heater shall utilize a low loss header design that utilizes an internal pump and heat exchanger bypass to reduce pressure drop through the vessel.

Recommended Accessories iQ1501:

1. Condensate Neutralizer Kit

This condensate is acidic, with a pH level between 3 and 4. Local building codes apply for an in-line neutralizer to be installed (not included) to treat this water.

2. Outdoor Installation Kit

3. iBMS BacNET

Intellihot's iNTouch BMS has three unique features that are not available in any other BMS in the industry.

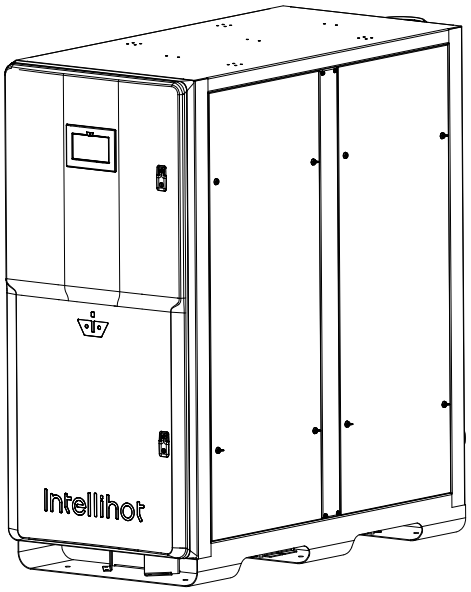
- External Pump Power – Powers building recirculation.
- Remote Setpoint – Allows the temperature to be set remotely via a 0-10 VDC or 4-20mA signal.
- Alarm – Buzzes if it detects anything wrong with any of the components it is connected to, and communicates the appropriate error codes so that the user knows which component needs attention.

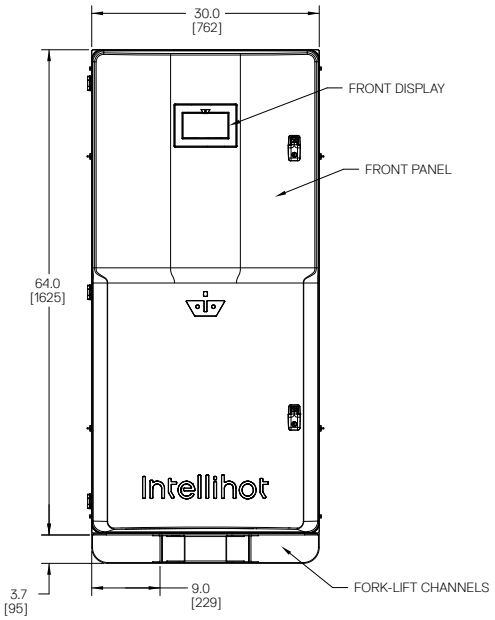
iQ1501 Specifications

PARAMETERS	MODELS
	iQ1501, Gen II
Type	Indoor/Outdoor, Floor Mounted, Condensing, Fully Modulating, On-Demand Water Heater
Fuel	Preset for NG / LP convertible
Minimum Input (BTU/hr)	30,000
Maximum Input (BTU/hr)	1,501,000
Maximum Output (BTU/hr)	1,440,960
Thermal Efficiency	96%
Turn Down Ratio (TDR)	50:1
Water Inlet / Outlet Connections	2" Headers with 6" OD Flange
Gas Inlet Connection	1-1/4" Gas Inlet With 4-5/8" OD Flange
Condensate Drain Connection	3/4" Flex PVC
Maximum Condensate Flow Rate (GPH)	10.8
Unit Dimensions H X W X D (Inches)	67.7 X 30 X 60.4 (66 CU. FT)
Service Clearances	Recommend 24" on all sides, 32" in the front
Unit Weight (LBS)	1025 LBS
Shipping Crate Dimensions H X W X D / Weight	87 X 47 X 83 (Inches) / 1567 (LBS)
Venting Type	Direct Vent (2 pipe - intake & exhaust), Power Vent (1 pipe - exhaust only)
Venting Materials (USA)	Sch. 40 PVC, Sch. 80 CPVC, Polypropylene, Stainless Steel (AL29-4C)
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)	6" Ø
Max Vent Length - Single Pipe / Power Vent*	65 ft (6")
Max Vent Length - Two Pipe / Direct Vent*	35 ft (6")
* Venting Note: From the maximum lengths above, deduct 5 ft. per 90º elbow and 2 ft. per 45º elbow	
Ignition	Electronic Spark Ignition
Temperature Range	100ºF – 190ºF
Temperature Stability	+/- 4ºF
Installation Location Ambient Temperature	40ºF – 130ºF
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
Pressure Relief Valve (Select BTU/hr Input Rating to Match Model Max Input)	1"
NG/LP - Min. Dynamic Gas Pressure (Full Fire)	NG = 2.5" WC;LP= 8" 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 Natural Gas, 11" WC for Propane
Electrical	120V AC, 60 Hz
Power Consumption	Max 29 Amps, 48W (Standby)
Internal Water Volume (gallons)	6
Features	**iQ**1501, Gen II
High Turn Down	50:1
Built-In Redundancy	Multiple Heat Engines w/ 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, AHRI
Performance GPM	**iQ**1501, Gen II
Hot Water Capacity, 45F Rise (GPM)	64.3**
Hot Water Capacity, 70F Rise (GPM)	41.3
Hot Water Capacity, 90F Rise (GPM)	32.1
Hot Water Capacity, 100F Rise (GPM)	28.9
Hot Water Capacity, 140F Rise (GPM)	20.7
WARRANTY†	**iQ**1501, Gen II
Basic Warranty (without StartUp)	Hex – 1 Year, Parts – 1 Year, Labor - None
Enhanced Warranty (with StartUp)	Hex – 10 Years, Parts – 2 Years, Labor - None
Labor Warranty (with Start Up & telliCare Connection)	Hex – 10 Years, Parts – 2 Years, Labor - 1 Year

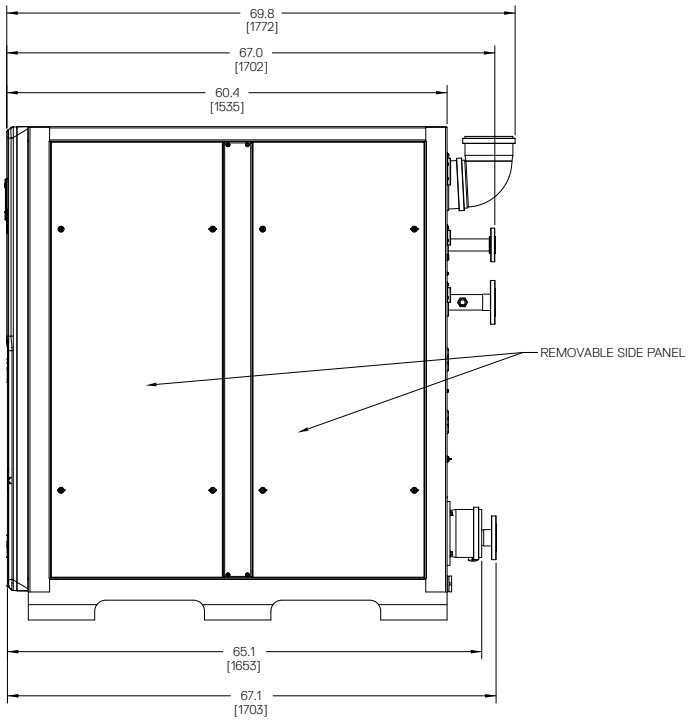
** These flow rates are intermittent, not continuous flow rates. Please refer to section 3.6 in the I/O Manuals.
† Heat Exchanger assembly (HEX) does not include, gas valve/blower assembly & sidecast. On 10 year| prorated after year 5. On 6 year| prorated after year 3. telliCare Service is free for one year. Start of warranty is: Per startup report or 2 months from date of manufacture, More specific warranty details can be found in I/O Manuals section 18.

iQ1501 Dimensional Specifications





FRONT VIEW



SIDE VIEW

Note: All dimensions are in Inches, and equivalent metric values are specified within []

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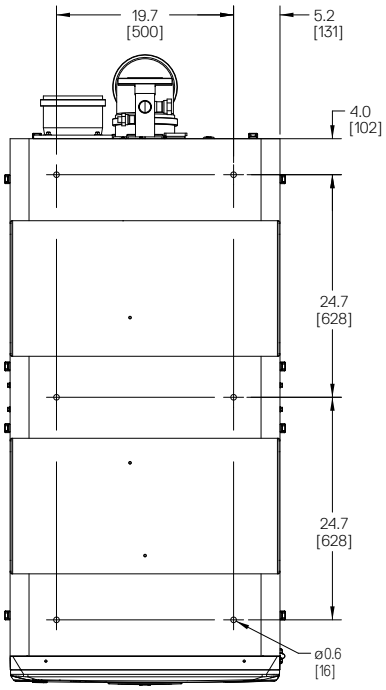
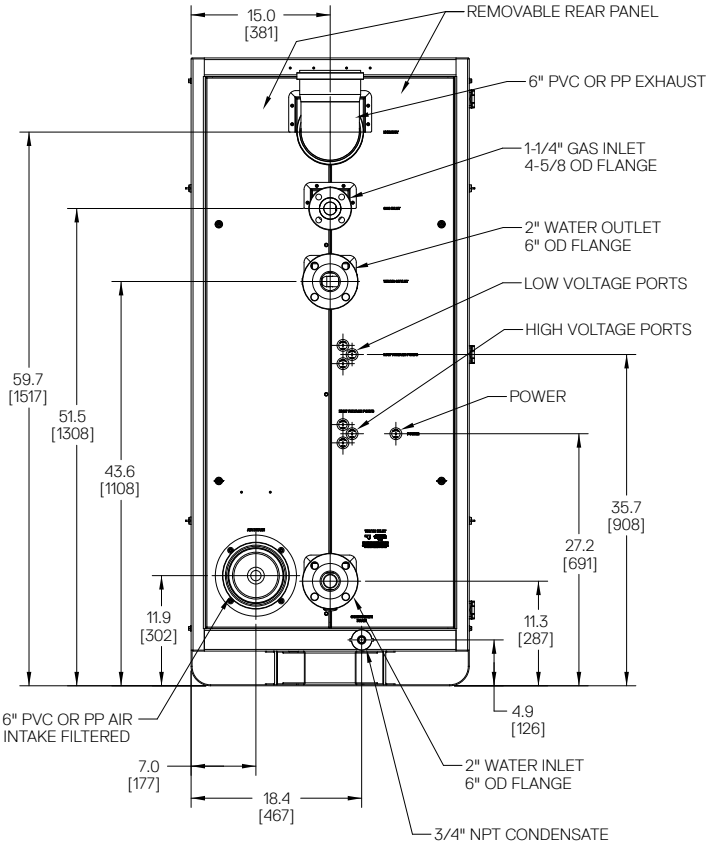
iQ1501 Dimensional Specifications



BOTTOM VIEW



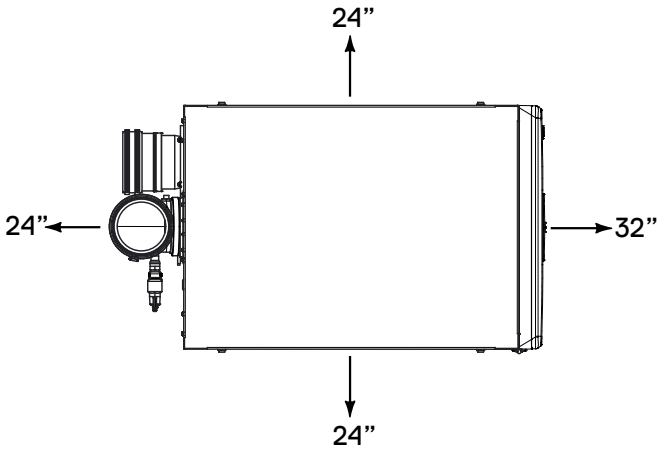
REAR VIEW

Note: All dimensions are in Inches, and equivalent metric values are specified within []

iQ1501, Gen II Service Clearances

Location	Required		Recommended
	From Combustibles	From Non-Combustibles	Service Clearance[1]
Top	6” (152 mm)	2” (50.8 mm)	18” (457 mm)
Back	5/8” (15.8 mm)	5/8” (15.8 mm)	24” (610 mm)
Sides	1” (25.4 mm)	1/2” (12.7 mm)	24” (610 mm)
Front	2” (51 mm)	2” (50.8 mm)	32” (813 mm)
Bottom	0” (0 mm)	0” (0 mm)	0” (0 mm)

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



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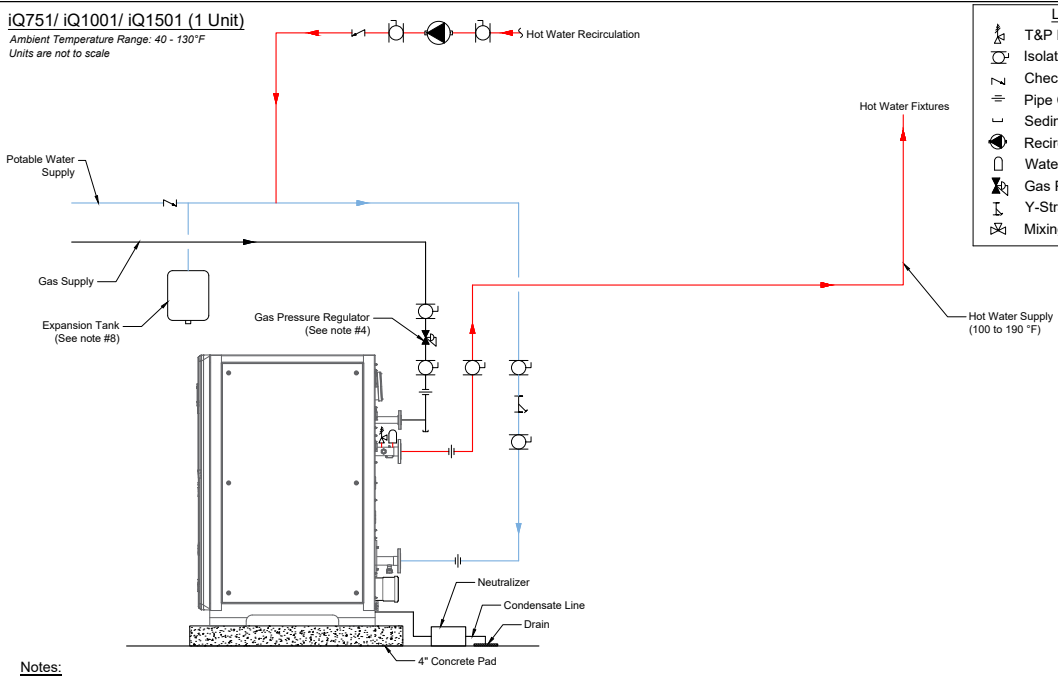
iQ1501, Gen II Configuration Options

iQ751/ iQ1001/ iQ1501 (1 Unit)

Ambient Temperature Range: 40 - 130°F
Units are not to scale



LEGEND
- T&P Relief Valve
- Isolation Valve
- Check Valve
- Pipe Coupling
- Sediment Trap
- Recirculation Pump
- Water Hammer Arrestor
- Gas Pressure Regulator
- Y-Strainer
- Mixing Valve

Notes:
1. This schematic is a suggested piping diagram. Any additional requirements from local codes and ordinances shall supersede this diagram.
2. Units are not to be installed in a closed loop system. Our gas fired units are HLW stamped.
3. For pipe sizes and gas pressure requirements, please refer to the operation and installation manual.
4. Gas pressure regulators to be installed for each unit. Follow manufacturer's installation instructions.
5. Water hammer arrestor to be installed on the top hot water outlet manifold port.
6. Y-strainer to be installed according to manufacturer's instructions, horizontal or vertical preferred.
7. Temperature and pressure relief valve (shipped with the unit) to be installed on the top hot water outlet manifold port.
8. Expansion tank to be sized based on the gallons of water in the plumbing system and to be installed per manufacturer's instruction.

DRAWING NUMBER:
JOB NAME:

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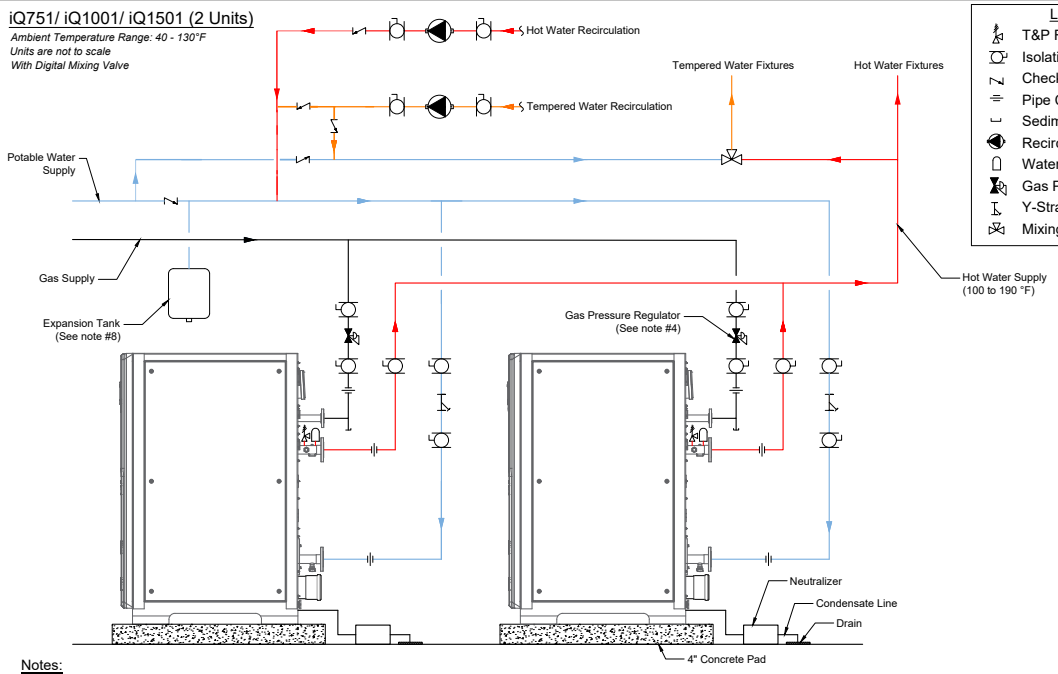
iQ751/ iQ1001/ iQ1501 (2 Units)

Ambient Temperature Range: 40 - 130°F
Units are not to scale
With Digital Mixing Valve



LEGEND
- T&P Relief Valve
- Isolation Valve
- Check Valve
- Pipe Coupling
- Sediment Trap
- Recirculation Pump
- Water Hammer Arrestor
- Gas Pressure Regulator
- Y-Strainer
- Mixing Valve

Notes:
1. This schematic is a suggested piping diagram. Any additional requirements from local codes and ordinances shall supersede this diagram.
2. Units are not to be installed in a closed loop system. Our gas fired units are HLW stamped.
3. For pipe sizes and gas pressure requirements, please refer to the operation and installation manual.
4. Gas pressure regulators to be installed for each unit. Follow manufacturer's installation instructions.
5. Water hammer arrestor to be installed on the top hot water outlet manifold port.
6. Mixing Valves, Pumps, Y-strainers, other Valves etc. to be installed according to their manufacturer's instructions.
7. Temperature and pressure relief valve (shipped with the unit) to be installed on the top hot water outlet manifold port.
8. Expansion tank to be sized based on the gallons of water in the plumbing system and to be installed per manufacturer's instruction.

DRAWING NUMBER:
JOB NAME:

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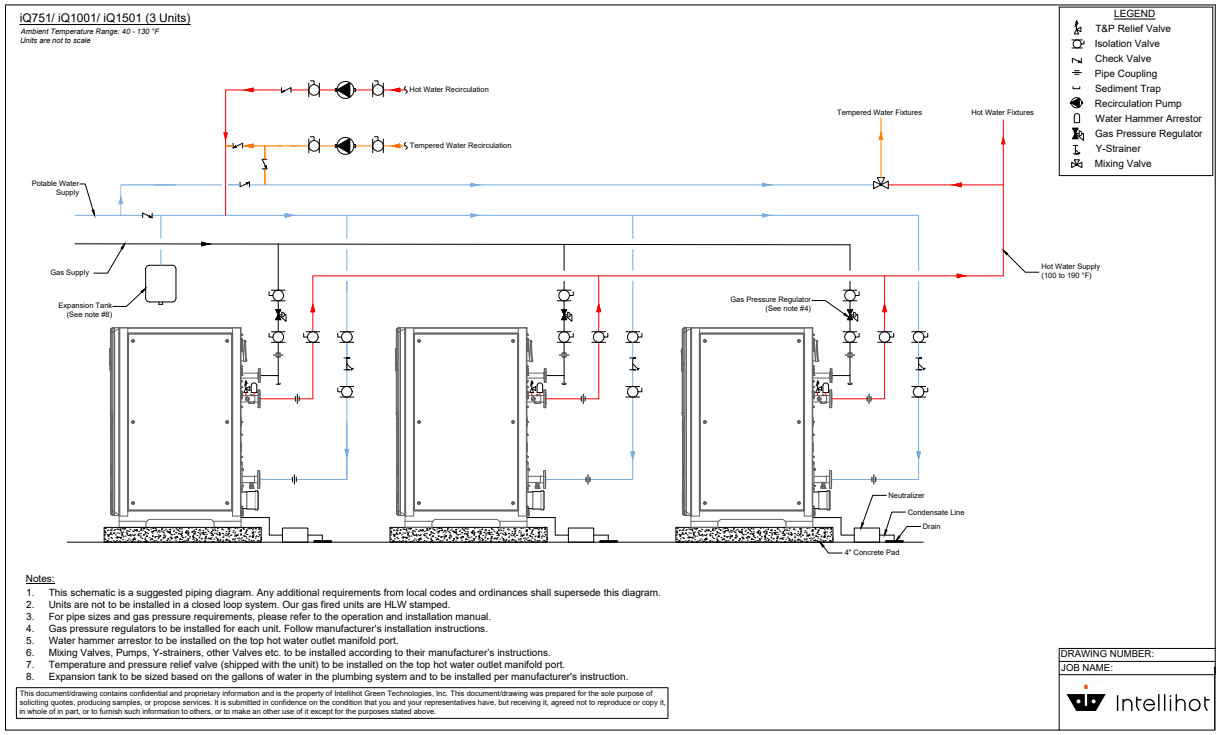
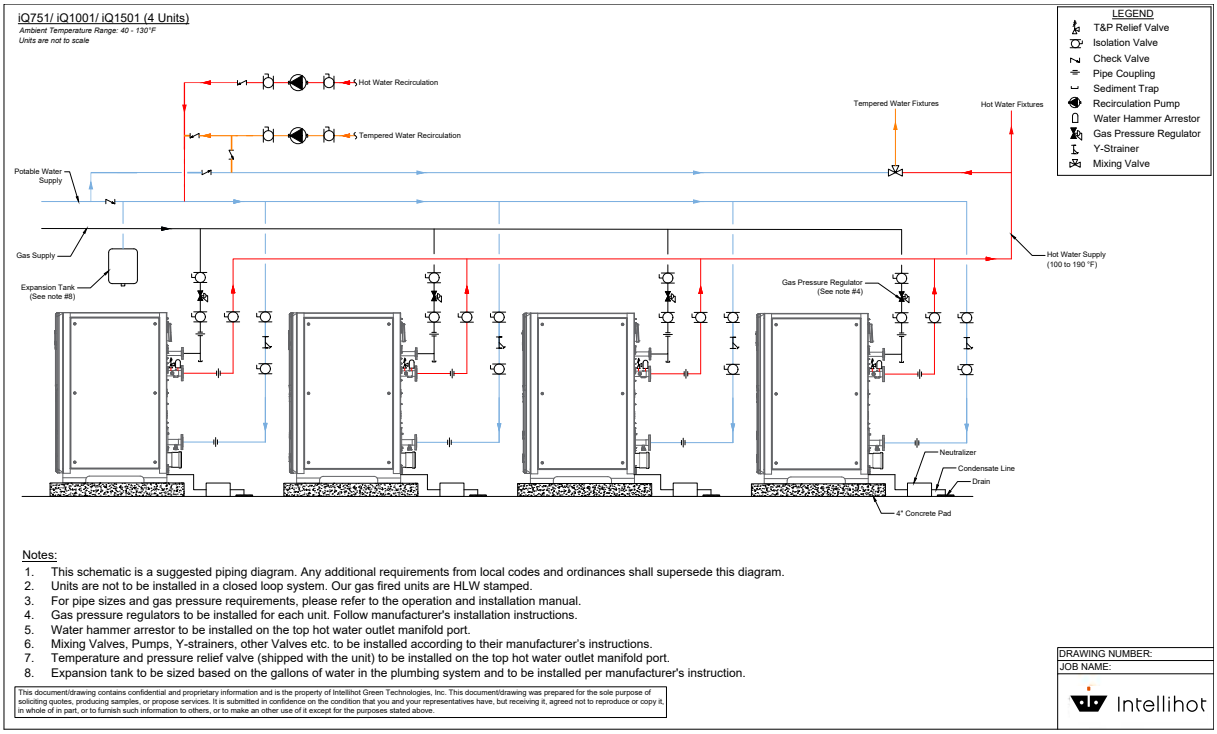
iQ1501, Gen II Configuration Options





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iQ1501, Gen II Venting Guidelines

Number of Units	Venting Type	Maximum Pipe Length in Feet				
		6" Diameter **iQ**1501	8" Diameter **iQ**1501	10" Diameter **iQ**1501	12" Diameter **iQ**1501	14" Diameter **iQ**1501
1	1 Pipe	65	270	500	500	500
	2 Pipe	35	135	250	250	250
2	1 Pipe	-	70	220	500	500
	2 Pipe	-	35	110	250	250
3	1 Pipe	-	-	110	500	500
	2 Pipe	-	-	55	125	250
4	1 Pipe	-	-	50	150	320
	2 Pipe	-	-	35	75	160

1 Pipe - Only exhaust out pipe is connected and the combustion air intake is from within the room. For example, one iQ1501 with a 6" diameter, the maximum exhaust pipe length for 1 pipe is 65 feet.

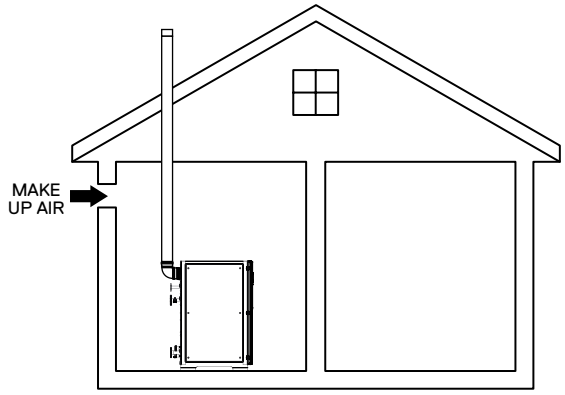
2 Pipe - Both the combustion air intake and the exhaust pipe are connected. In this case, the table specifies the maximum length per pipe. For example, one iQ1501 with 6" diameter, 35 feet maximum is allowed for combustion air intake pipe and exhaust out pipe. The 35 feet maximum is per pipe.

Note:

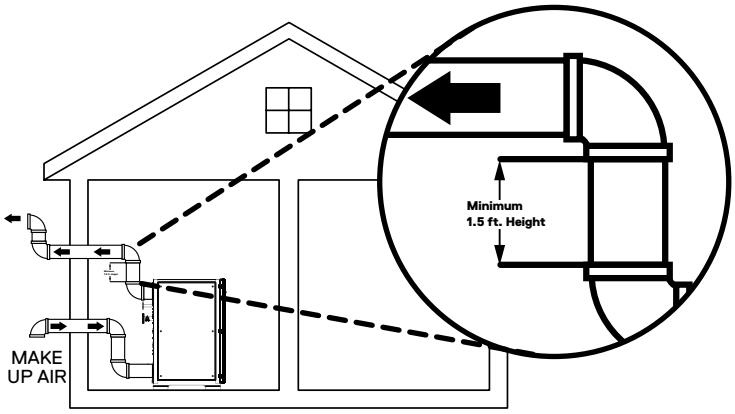
1. Reduce the maximum equivalent length above by 5 feet per 90º elbow used and by 2 feet per 45º elbow used. Do not exceed the above set limits.

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.

3. SAFETY INSTRUCTIONS: Do not connect any other appliance vents to the water heater inlet or outlet pipes.



1-Pipe Direct Vent



2-Pipe Direct Vent

iQ1501, Gen II 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 29A (FLA). Larger breakers can be used for multiple units. Please ensure correct polarity of wiring before powering up unit.

iQ1501, Gen II Cascading Compatibility

Model	Compatible (Max # of Cascaded Units)
iQ751	Yes (Max 4 Units)
iQ1001	Yes (Max 4 Units)
iQ1501	Yes (Max 4 Units)
All other Models (i200, i250, iQ251, iQ251D, iN401, iN501, iQ2001 and iQ3001	Not Supported

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