iQ251, Gen II Submittal Data

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

	Temperature Rise (ΔT)°F						
	40	50	60	70	80	90	100
Flow (GPM)	12.0	9.6	8.0	6.9	6.0	5.4	4.8

KEY FEATURES

- Stainless (316L) Heat Exchanger
- Flexible-Floating Design, stress-relieving and thermal shock resistant
- 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.
- 3.5" Color Touch Screen - access to usage data, troubleshooting, and parts wear
- Wi-Fi Connectivity

PERFORMANCE

- Turndown Ratio of 8.3:1 per unit.
- Cascade up to 10 units with common venting for a total of over 2500MBH and a 83:1 total turndown ratio

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iQ251, Gen II Specifications

PARAMETERS	**iQ**251, Gen II
Type	Indoor/Outdoor, Wall Hung, Fully Condensing, Tankless On-Demand Water Heater
Fuel	Preset for NG / LP convertible
Minimum / Maximum Input (BTU/hr)	30,000 / 251,000
Maximum Output (BTU/hr)	240,960
Thermal Efficiency	96%
Dimensions H X W X D (Inches)	26.2 X 17.7 X 15 (3.9 CU. FT)
Weight (LBS)	90 LBS
Water Inlet / Outlet Connection	3/4" NPT
Gas Inlet Connection	3/4" NPT
Minimum Flow Rate for Activation	0.6 GPM
Ignition	Electronic Spark Ignition
Venting Type	Direct Vent (2 pipe – intake & exhaust), Power Vent (1 pipe – exhaust only)
Venting Materials	Sch. 40 PVC, Sch. 80 CPVC, Polypropylene, Stainless Steel (AL29-4C)
Max 3" Vent Length – Single Pipe / Power Vent	130 ft, deduct 5 ft per 90º elbow
Max 3" Vent Length – Two Pipe / Direct Vent	65 ft, deduct 5 ft per 90º elbow
Common Venting	Yes
Installation Location Ambient Temperature	40ºF – 130ºF
Safety	Flame Rod, Thermal Fuse, Overheat Prevention Device, Fan Speed Monitor, Flue Temperature Monitor, Blocked Vent Detector, Water Shut-Off Valve, 2X10A Fuse, Dual Flame Sensing, Flue Damper
Water Pressure Min / Max (PSI)	30 / 160
NG/LP – Minimum Static Gas Pressure 1/2" (non-corrugated, black iron)	6" WC
NG/LP – Minimum Static Gas Pressure 3/4" (non-corrugated, black iron)	2.5" WC
NG/LP – Maximum Static Gas Pressure	14" WC
Gas Pressure for Adjustments	8" WC for NG, 11" for LP
Electrical	120V AC, 60 Hz
Power Consumption	500W (Max 4.2 Amps), 8W (Standby)
FEATURES & PERFORMANCE	**iQ**251, Gen II
Listing	ETL (Z21.10.3 / CSA 4.3), ASME HLW, SCAQMD (Low NO_X)
Cascading	Masterless, 10 units
Heat Exchanger	Expandable, Stainless 316L
Hot Water Capacity (35F Rise)	13.8
Hot Water Capacity (45F Rise)	10.7
Hot Water Capacity (77F Rise)	6.3
Commercial Mode Temp. Settings	100 – 190ºF
Warranty (with recirculation, and unlimited thermal cycles)	Heat Exchanger Coil – 10 years, Parts – 2 years

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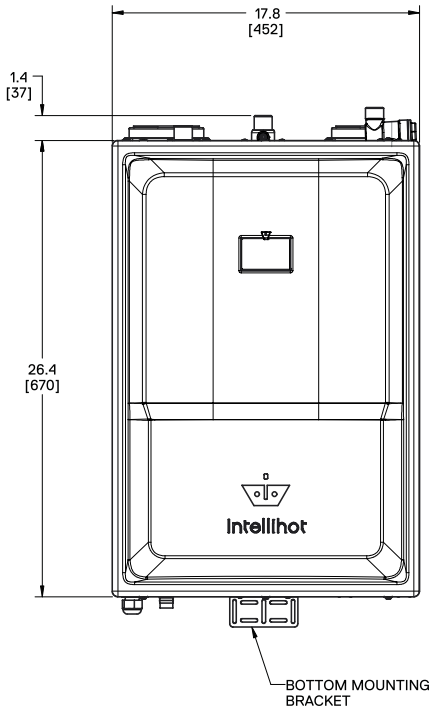
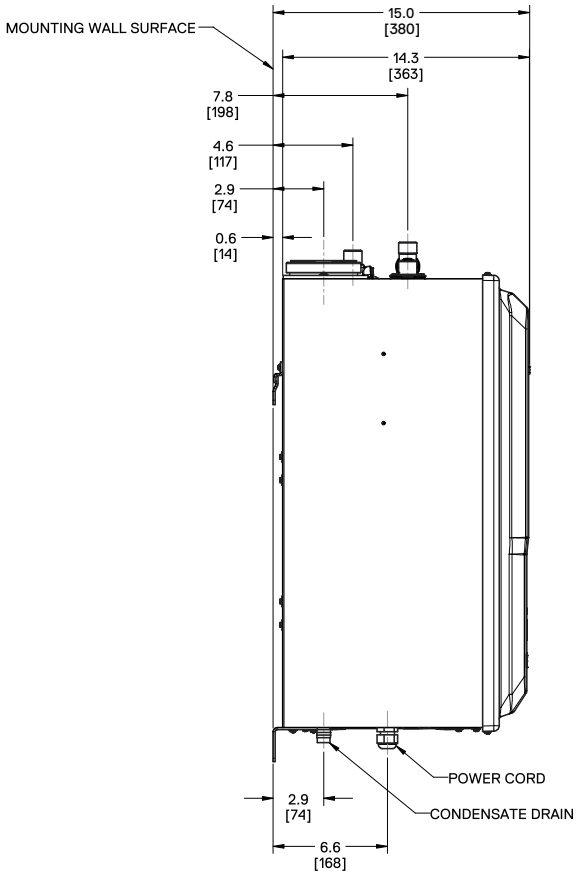
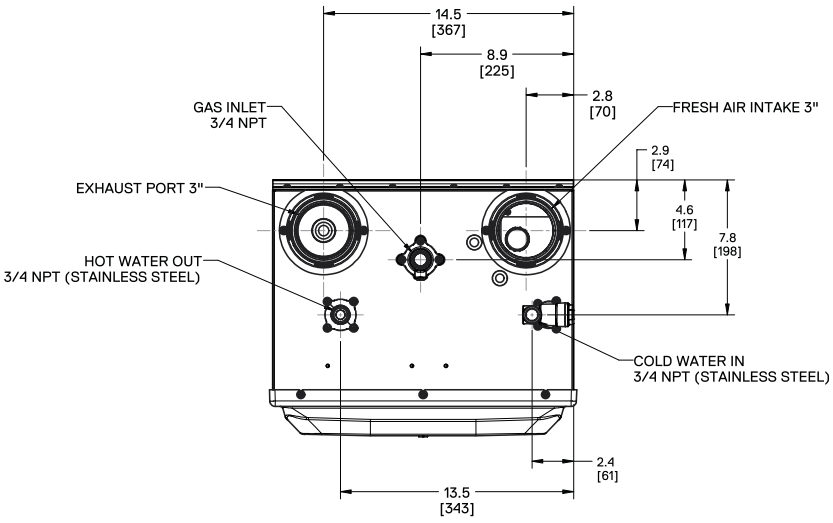
iQ251, Gen II Dimensional Specifications



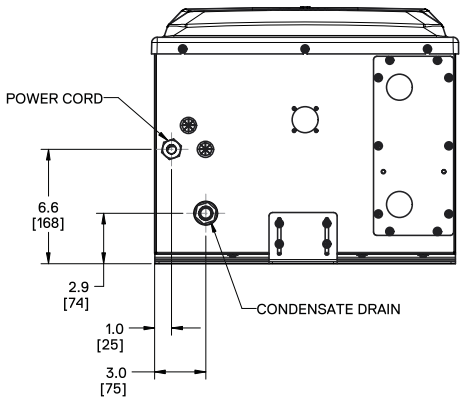
FRONT VIEW



SIDE VIEW



TOP VIEW



BOTTOM VIEW

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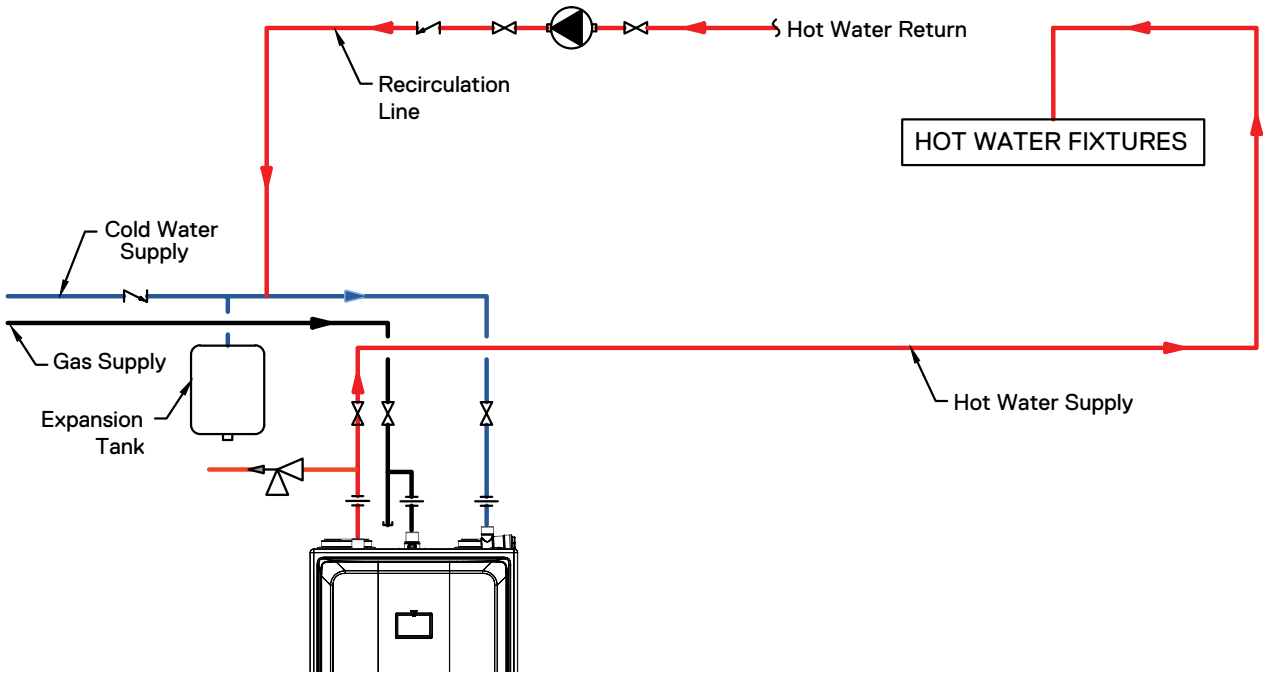
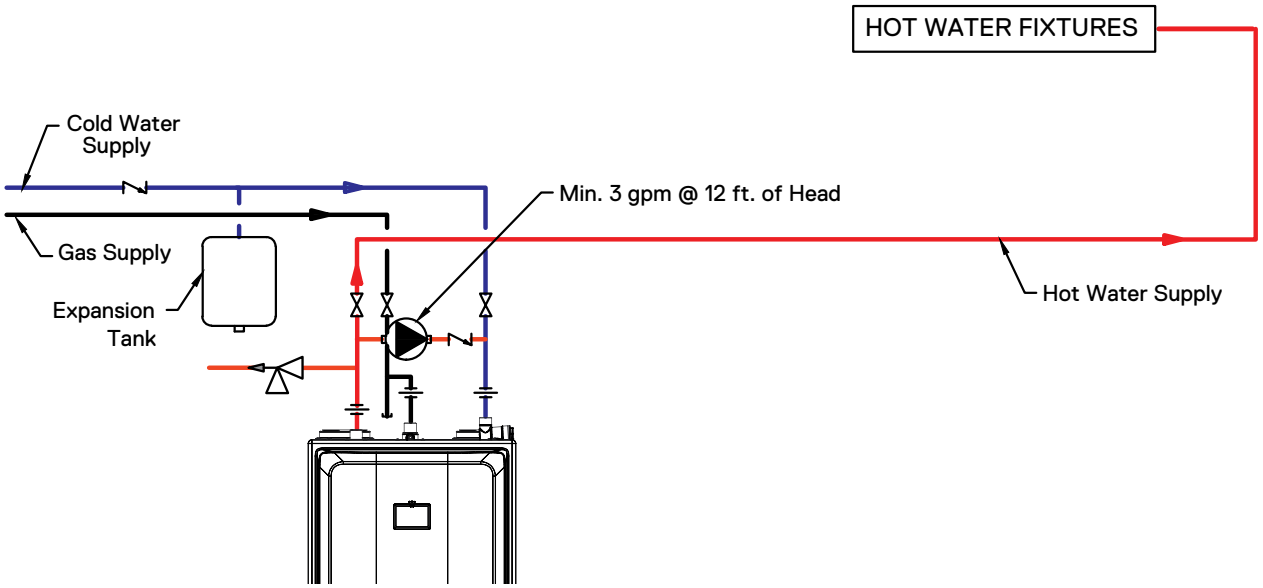
iQ251, Gen II External Recirculation



"RESTAURANT" OPTION WITH NO BUILDING RECIRCULATION



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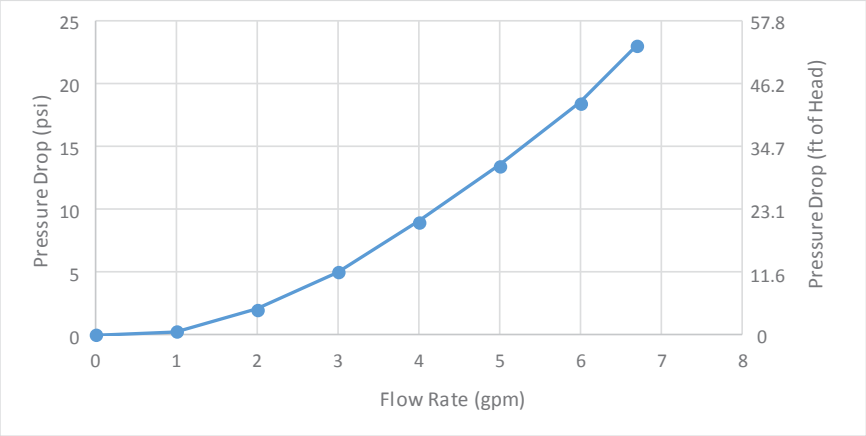
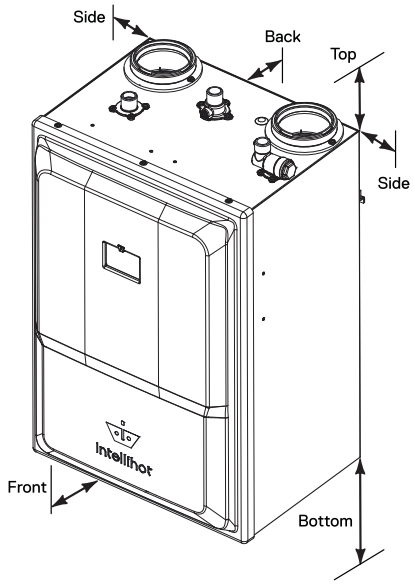
iQ251, Gen II Pressure Drop & Clearance Requirements



Location	Required		Recommended
	From Combustibles	From Non-Combustibles	Service Clearance[1]
Top	6” (152 mm)	2” (50.8 mm)	12” (305 mm)
Back	5/8” (15.8 mm)	5/8” (15.8 mm)	5/8” (15.8 mm)
Sides	1” (25.4 mm)	1/2” (12.7 mm)	5/8” (15.8 mm)
Front	2” (51 mm)	2” (50.8 mm)	30” (762 mm)
Bottom	12” (305 mm)	12” (305 mm)	12” (305 mm)

[1] Service clearances are suggested to allow for normal service.

[2] Mounting bracket automatically sets this dimension.



iQ251, Gen II Electrical Data

Electrical power required for the water heater is 120V AC, 60 Hz. The circuit breaker shall be a minimum of 15 amps. Only one water heater should be plugged into an outlet. Please ensure correct polarity of outlet before plugging in heater.

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iQ251, Gen II Venting

Maximum Pipe Length in Feet					
Number of Units	**Venting Type**	**3" Diameter** **iQ**251, Gen II	**4" Diameter** **iQ**251, Gen II	**6" Diameter** **iQ**251, Gen II	**8" Diameter** **iQ**251, Gen II
1	1 pipe - PV	130	200	200	200
	2 pipe - DV	65	100	100	100
2	1 pipe - PV	-	150	200	200
	2 pipe - DV	-	75	100	100
3	1 pipe - PV	-	70	200	200
	2 pipe - DV	-	35	100	100
4	1 pipe - PV	-	-	200	200
	2 pipe - DV	-	-	100	100
5	1 pipe - PV	-	-	200	200
	2 pipe - DV	-	-	100	100
6	1 pipe - PV	-	-	140	200
	2 pipe - DV	-	-	70	100
7	1 pipe - PV	-	-	100	200
	2 pipe - DV	-	-	50	100
8	1 pipe - PV	-	-	80	200
	2 pipe - DV	-	-	40	100
9	1 pipe - PV	-	-	-	200
	2 pipe - DV	-	-	-	100
10	1 pipe - PV	-	-	-	200
	2 pipe - DV	-	-	-	100

PV = Power Vent
DV = Direct Vent

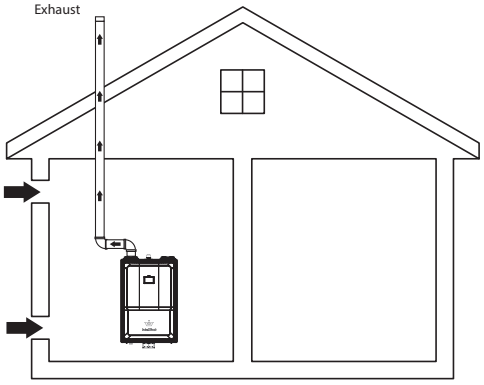
Notes: Reduce the maximum equivalent length above by 5 feet per 90° elbow and by 2 feet per 45° elbow. Do not exceed above limits.

1 pipe - Only exhaust out pipe is connected and the combustion air intake is from within the room. For example, one iQ251 with a 3" diameter, the maximum exhaust pipe length for 1 pipe is 130 feet.

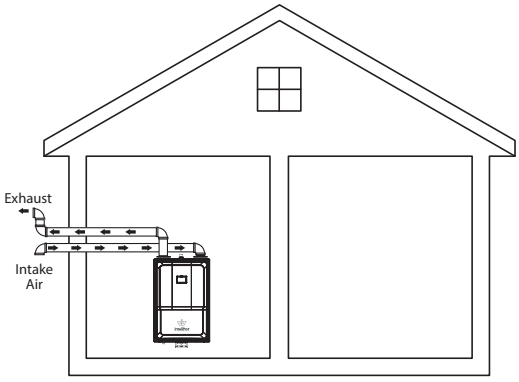
2 pipes - Both the Combustion air intake and the exhaust pipe are connected. In this case, the table specifies the maximum length per pipe. For example, one iQ251 with 3" diameter, 65 feet maximum is allowed for combustion air intake pipe and exhaust out pipe. The 65 feet maximum is per pipe.

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 Direct Vent



2-Pipe Direct Vent

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