

iE1 Submittal Data

Date:	<input type="text"/>	Bid Date:	<input type="text"/>
Project Name:	<input type="text"/>	Factory Option:	<input type="checkbox"/> Solar
Project #:	<input type="text"/>	Electric Option:	<input type="checkbox"/> iE1 STD
City State Zip:	<input type="text"/> <input type="text"/> <input type="text"/>		<input type="checkbox"/> iE1 MID
Engineer:	<input type="text"/>		<input type="checkbox"/> iE1 MAX
Contractor:	<input type="text"/>		

Operational Modes	Temperature Rise (ΔT) °F - (80 °F Ambient Temperature)											
	30	40	50	60	70	80	90	100	110	120	130	140
iE1 STD (GPH)	227	170	136	114	97	85	76	68	62	57	52	49
iE1 MID (GPH)	309	232	185	155	132	116	103	93	84	77	71	66
iE1 MAX (GPH)	391	293	235	195	168	147	130	117	107	98	90	84



KEY FEATURES

- No storage, tankless, heats on-demand
- Uses CO₂, GWP of 1
- Suitable for high-pressure multistory buildings
- Handles tough hard water scale
- Produces water up to 170°F

DESIGN FEATURES

- Factory monitoring via telliCare messaging.
- Automatic software update over the air
- Grid enabled (CTA-2045)
- Wirelessly cascade over Bluetooth up to 6 units
- Can be installed indoors or outdoors
- Compact and lightweight
- Designed and built in the US

OPERATIONAL MODES

- Efficiency
- Hybrid
- Electric
- Self-learning



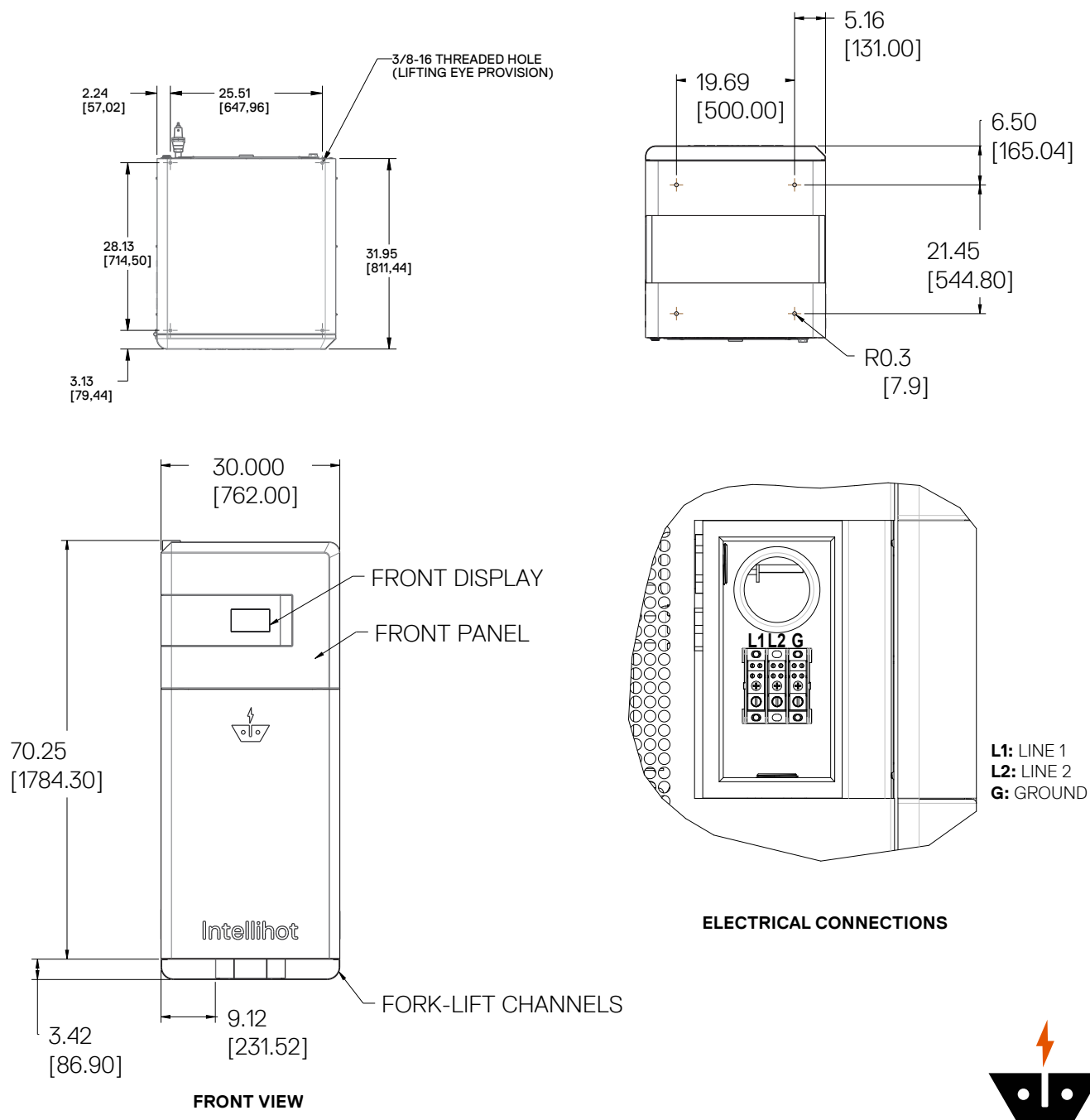
iE1 Specifications

Technical Data	iE1 STD	iE1 MID	iE1 MAX
Type	Indoor / Outdoor, Floor Mounted		
Power Source	Electric		
Supply Input Voltage	208 V AC, 60 Hz, 1Ph	208 V AC, 60 Hz, 3Ph	
Number of Wires	3 Wires (L1, L2 and G)	5 Wires (L1, L2, L3, N and G)	
Electric Input, kW	3.4	9.4	15.4
Heating Output (BTU/Hr)	Up to 57,000	Up to 77,000	Up to 97,000
Current, FLA (Amps)	16.6	45.4	49.8
Minimum Circuit Ampacity, MCA (Amps)	20.8	49.6	54.1
Minimum Recommended Circuit Breaker (Amps)	25	50	60
Maximum Overcurrent Protection, MOP (Amps)	35	70	90
Resistive Heating Elements	0	1 (6 kW)	2 (2 x 6 kW)
COP	Up to 4.9 (without Heating Elements)		
Compressor Type	Rotary		
Safety Devices	Pressure Switch, Thermal Cutout, and Overheat Protection		
Ambient Installation Temperature	-10° to 110°F		
Air Flow Requirement	2500 CFM		
Outlet Water Temperature Range	100°F to 170°F		
Temperature Stability	+/- 4°F		
First Hour Rating	154 Gallons	199 Gallons	244 Gallons
Connectivity	Cellular and Bluetooth		
Operational Modes	Efficiency, Hybrid, Electric, Self-learning		
Grid Connectivity	Via CTA-2045 module (customer supplied)		
Refrigerant	R744, CO2 refrigerant		
Refrigerant Charge Quantity	3.96lbs (1.8 kg)		
Refrigerant Max Allowable Pressure	2175 PSI (15 MPa)		
Cascading Protocol	Masterless, Up to 6 units		
Noise Level	Up to 55 dBA		
Domestic Heat Exchanger	Stainless Steel, 316L		
Energy Storage	Water-Propylene-Glycol based Thermal Battery		
Water Inlet & Outlet Connections	1-1/2” NPT Female		
Unit Dimensions H X W X D	72 in X 30 in X 30 in		
Shipping Weight / Unit Weight	880 LBS / 758 LBS (with 5 Gallons Glycol), 1150 LBS (Thermal Battery Full)		
Water Pressure Min / Max	30 PSI (0.21 MPa) / 160 PSI (1.1 MPa)		
Clearances			
Back	24”		
Front	30”		
Top	30”		
Sides	12”		
Certifications	Energy Star, NSF 372, UL 60335-2-40, CSA C22.2 and CTA-2045		
Warranty	1 Year on Parts and Compressor, 3 Years on Thermal Battery		
Note: Due to Intellihot’s policy of continuous product improvements the design and technical specifications are subjected to change without notice.			

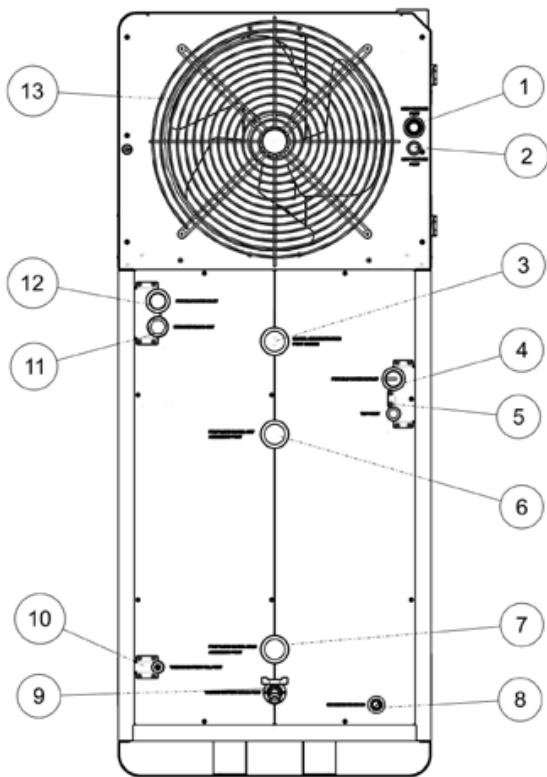
iE1 Short Spec

The water heater shall be a floor-mounted, integrated heat pump water heater with on-board thermal battery capable of heating domestic hot water without potable water storage. The heat pump should utilize a VFD rotary-type compressor using R744 as the refrigerant. The non-pressurized thermal battery shall utilize a food-grade propylene glycol mixture as the thermal fluid, monitored by an in-built glycol concentration sensor. Water will be heated through a 316L stainless steel heat exchanger suspended in the thermal battery fluid. The set temperature range of the heater will be 100F – 170F.

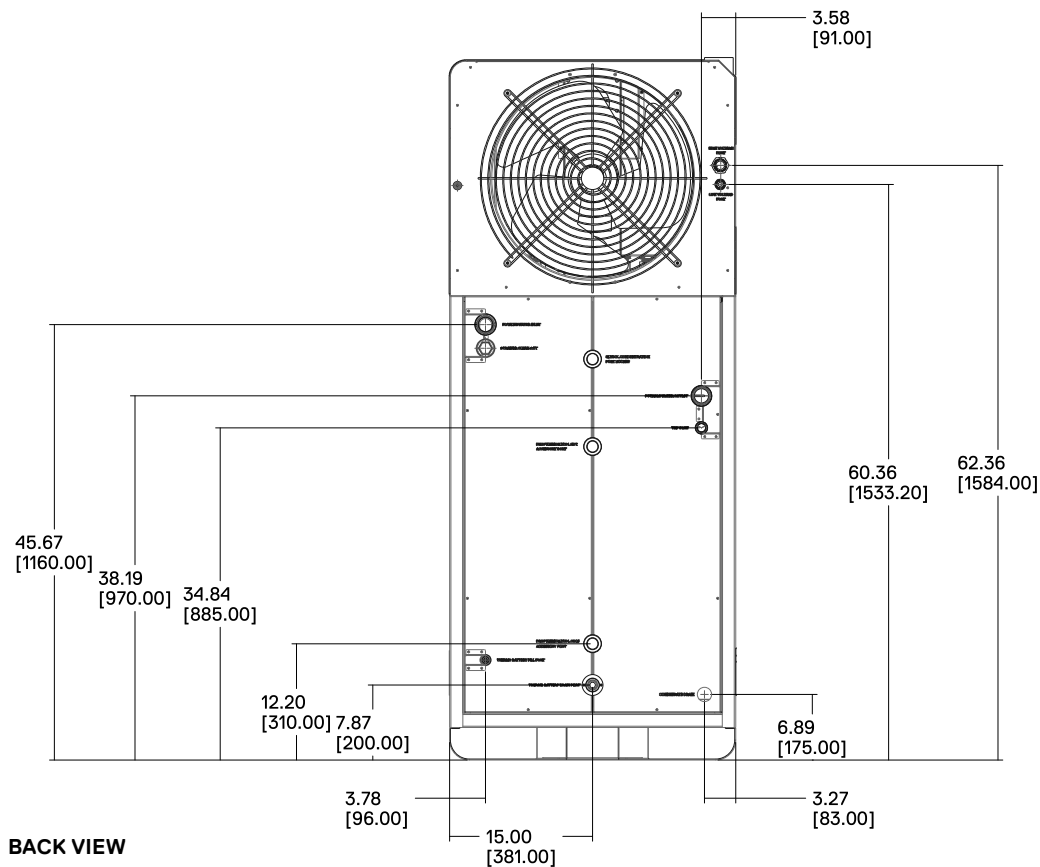
iE1 Dimensional Specifications



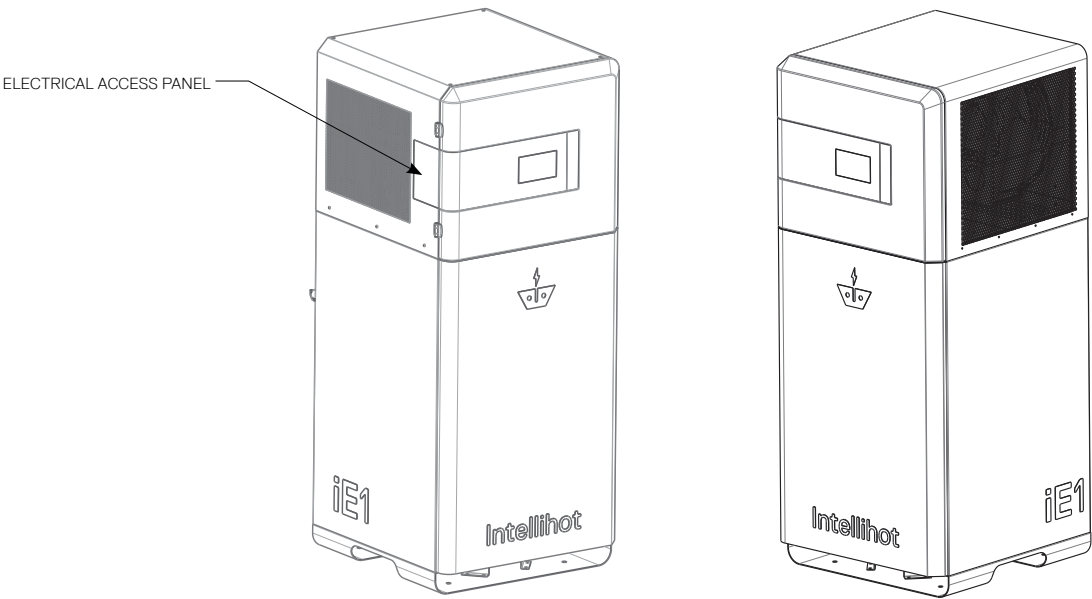
iE1 Dimensional Specifications



Item No.	Nomenclature	Comments
1	High voltage Port	Power lines are routed from here to the terminal block. Refer to section 7
2	BMS, low voltage port	Low voltage BMS signal connection.
3	Glycol Concentration Sensor	Access point for Glycol concentration sensor also used to refill glycol.
4	Hot water outlet Port	Refer to section 6.0 for Hot water pipe installation
5	Pressure Relief valve port	Refer to section 6.0 for Pressure Relief valve installation
6	Glycol Hot Accessory Port	This port used with new unit glycol filling. Refer to section 6.0
7	Propylene Glycol Cold Accessory Port	
8	Condensate Drain	Refer to section 6.0 for Condensate Drain installation
9	Thermal Battery drain valve	
10	Thermal Battery Fill Port	This port is connected to water inlet with a dual check valve. Refer to section 6.0
11	Water Inlet strainer clean out port	Refer to maintenance section 10 for strainer clean out procedure
12	Cold Water inlet port	Refer to section 6.0 for Cold water pipe installation
13	Fan	Refer to maintenance section 10 for fan maintenance

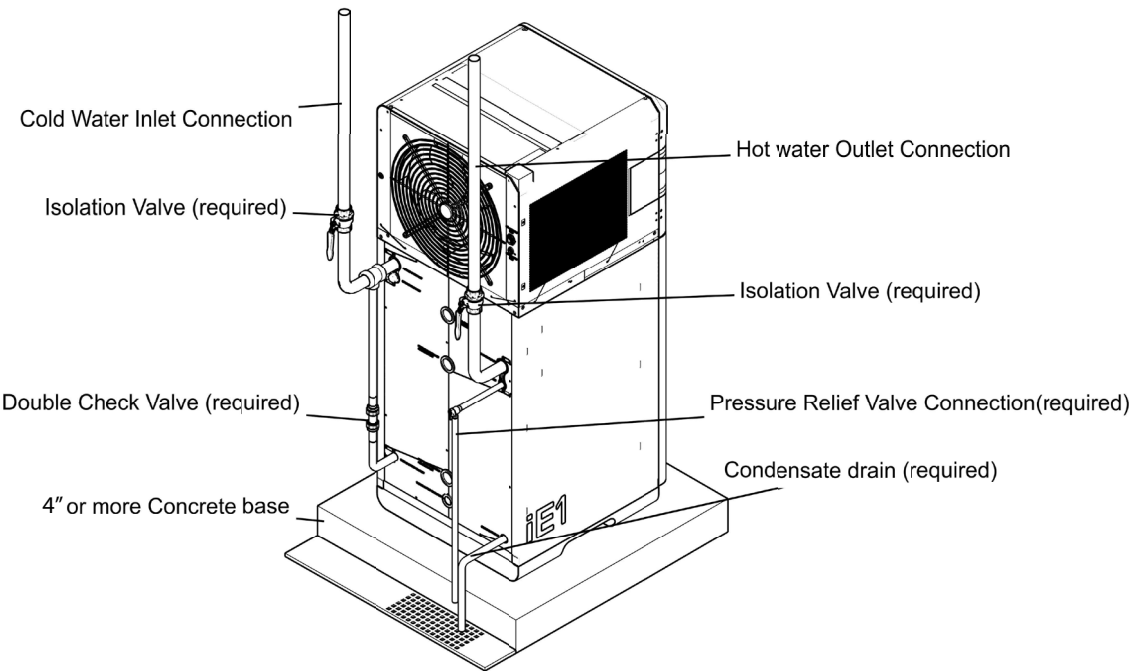


iE1 Dimensional Specifications

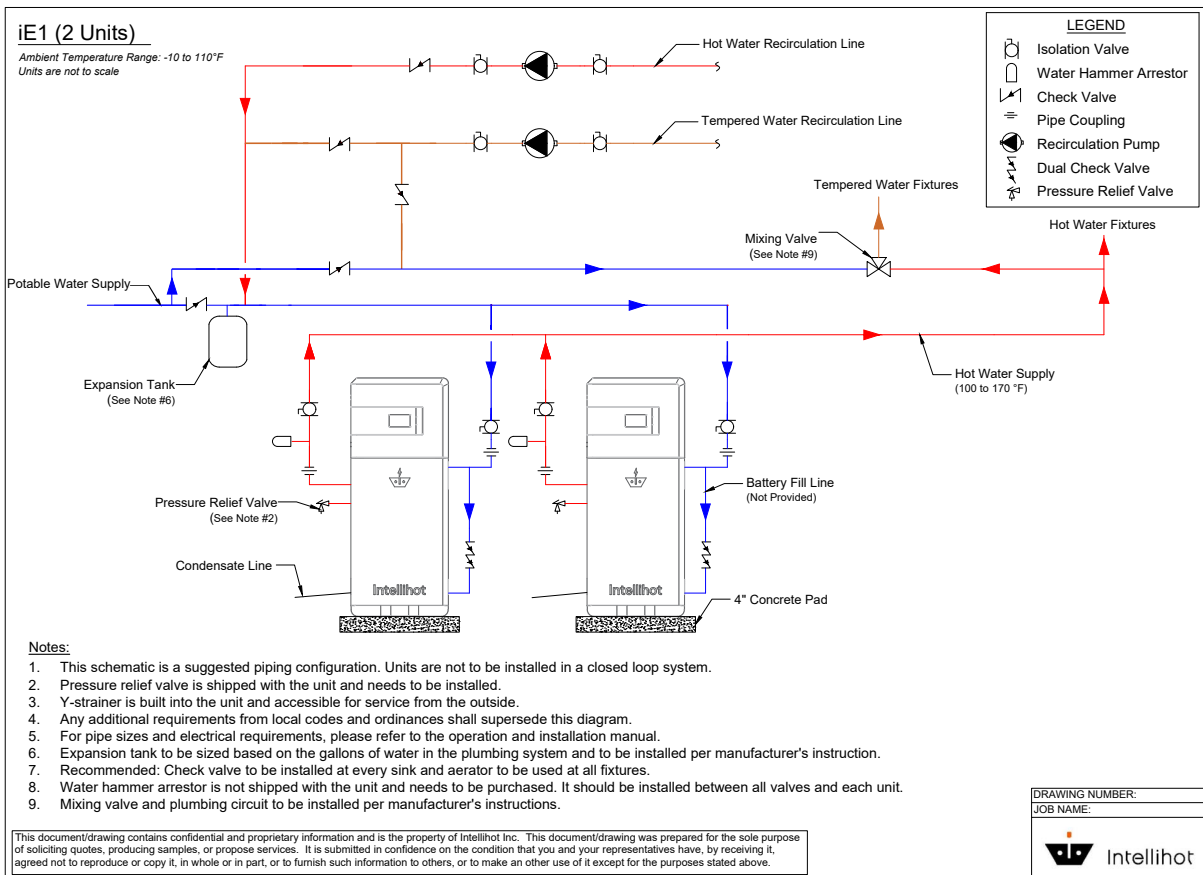
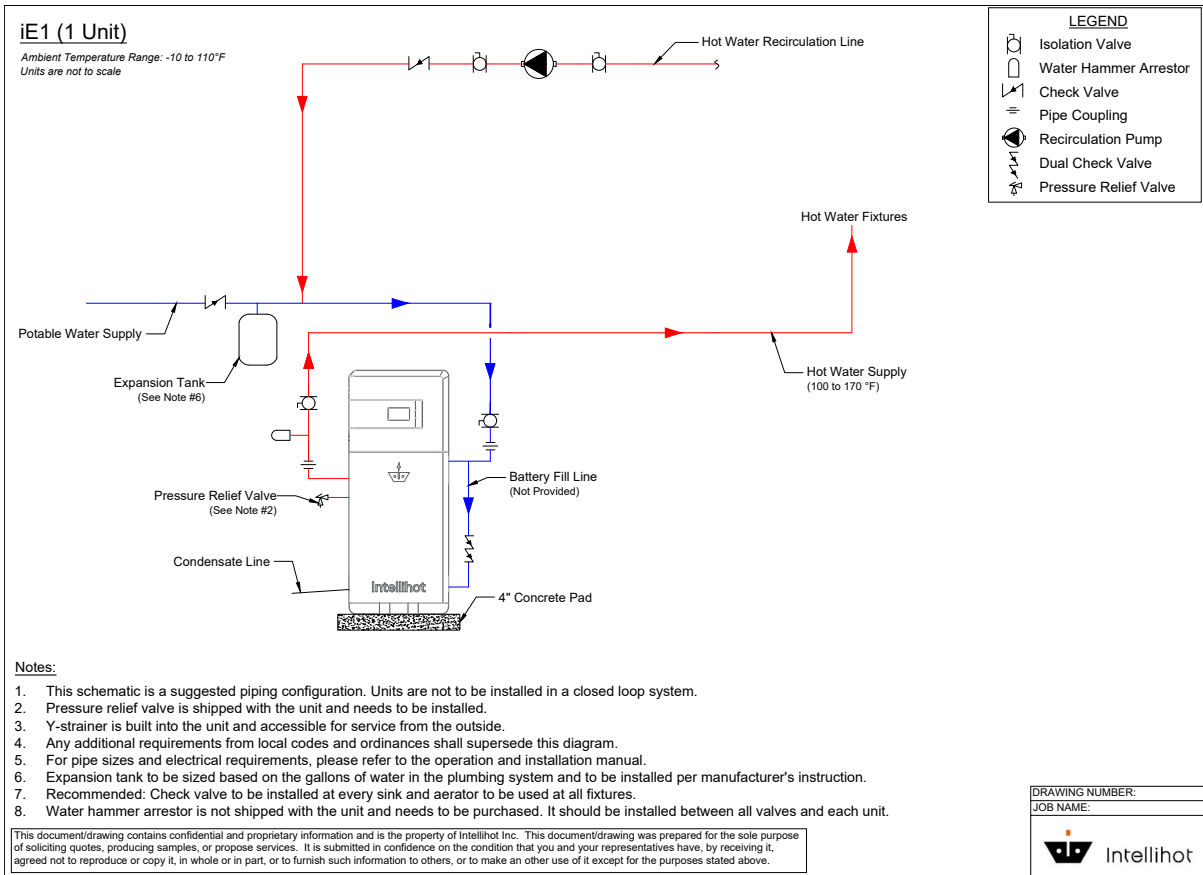


SIDE VIEWS

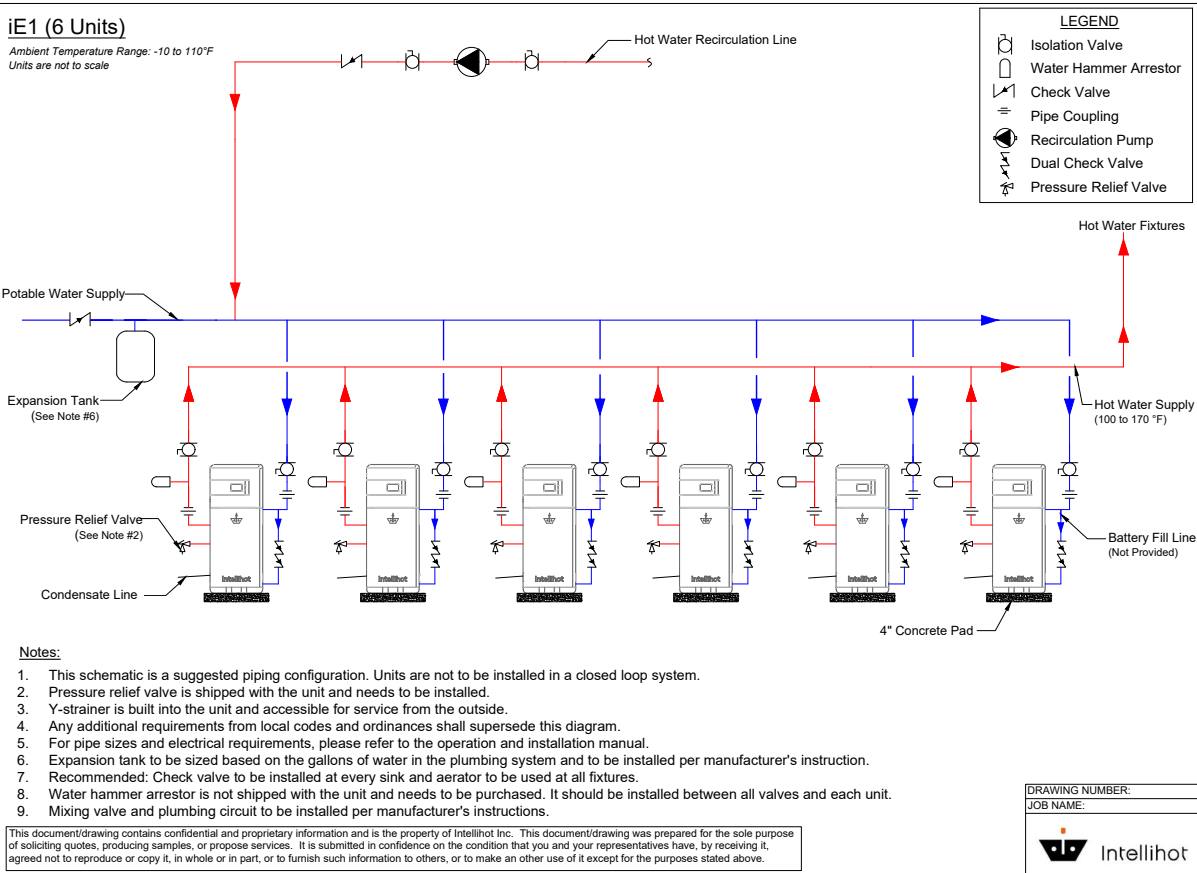
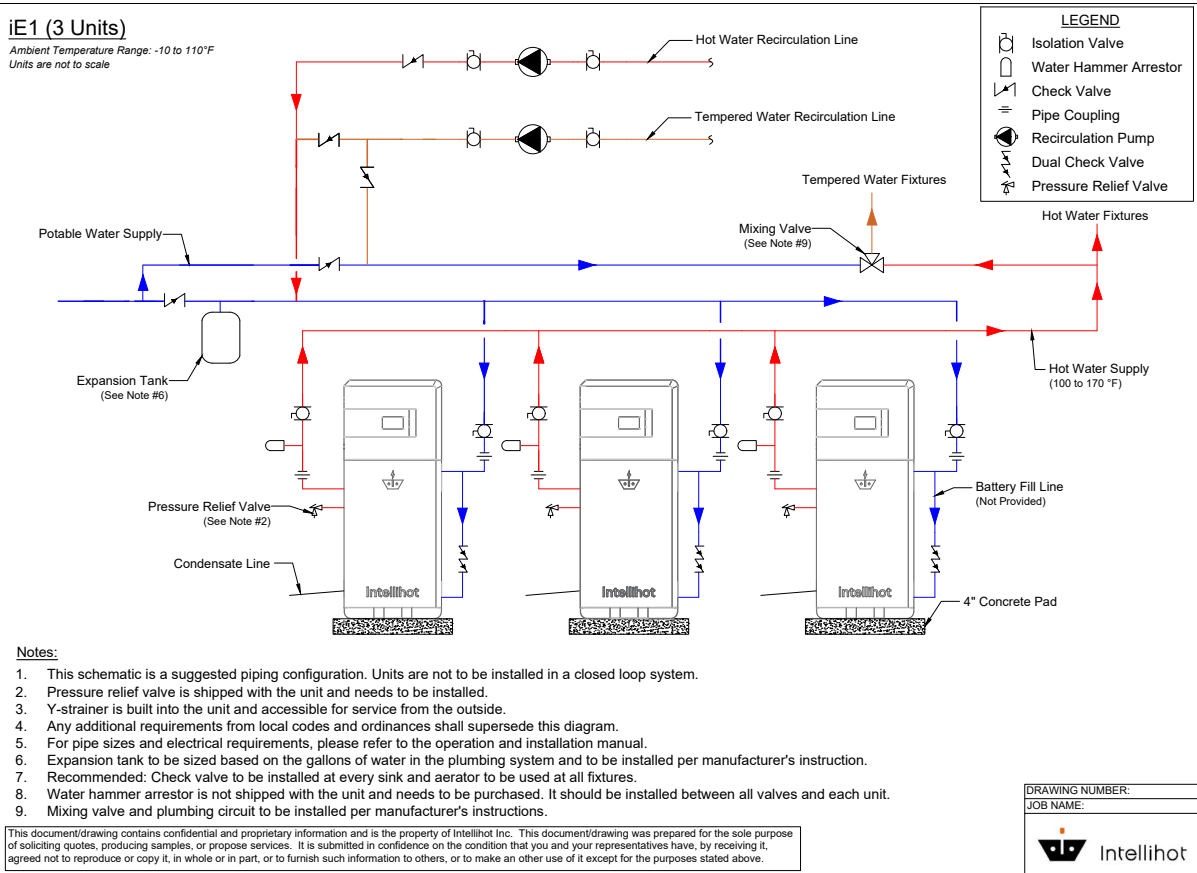
iE1 Plumbing Setup



iE1 Configuration Options



iE1 Configuration Options

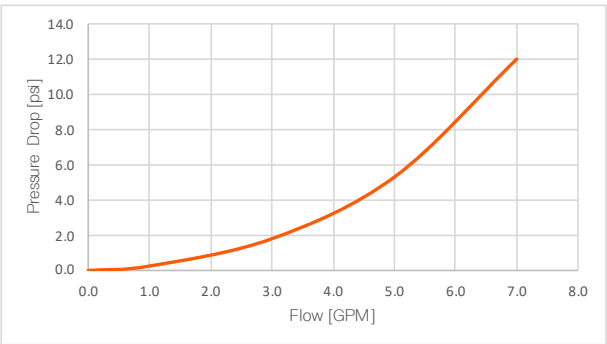


iE1 Electrical Requirements

Electrical power required for the water heater is 208 VAC, 60 Hz. Each unit must have it's own dedicated breaker with a shut off switch. The shut off switch located near the sight of the water heater for maintenance and emergency shut off. Please ensure correct polarity of wiring before powering up unit. Select a model that suits your electrical infrastructure the best:

	iE1Std	iE1Mid	iE1Max
Minimum Breaker Size	25 Amps	50 Amps	60 Amps

iE1 Pressure Drop



iE1 Cascading

Up to six units can be cascaded wirelessly using the built-in Bluetooth capability.

iE1 Clearance Requirements

The clearances are listed in the table below. For ease of installation and in order to achieve service clearances, perform electrical connections first before making all other connections (water and condensate).

Clearance	Required		Recommended
	From Combustibles	From Non-Combustibles	
Top	8"	8"	30"
Back	30"	30"	30"
Sides	24"	24"	30"
Front	30"	30"	30"

¹ Required clearances to enable easier service of the unit.

