



Intellihot

Endless Water. Zero Waste™

COMBIS

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Hot Water + Space Heating

i200X, i250X, i201X, i251X



Designed and
built in the USA

SIMULTANEOUS HOME HEATING AND HOT WATER PRODUCTION.

i200X, i250X, i201X, i251X

Combis Model Overview

Input BTU/h	ASME-H	ASME-U
199,950	i201X	i200X
250,000	i251X	i250X

Maximum domestic hot water with space heating.

Provide endless hot water while maintaining a comfortable space temperature. In most combi boilers, hot water heating is an afterthought. Intellihot's combi models deliver a large quantity of hot water while simultaneously keeping your house comfortable. They elegantly combine domestic hot water and space heating with one unit, one gas line and one vent.

Intellihot's combi models deliver a full quantity (200MBH or 250MBH) of domestic hot water when needed and easily modulate down to efficiently deliver up to 125 MBH of space heating.

How does it work?

Turn on a faucet and Intellihot will begin to deliver hot water. If space heating is called for, the on-board circulator begins to deliver up to 125,000 btu/h to the internal plate-type heat exchanger (PTHE) simultaneously. With no diverting valve to adjust, fail or malfunction, the Intellihot combi is extremely robust. The PTHE separates the domestic hot water from the space heating water to maintain safety and quality.

Designed and built in the USA.

Founded in 2005, after a traditional water heater broke down and flooded our founder's basement, Intellihot today designs, manufactures and builds tankless water heaters for commercial, industrial and residential applications - the first to do so entirely in the United States.

Contact Information

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WHAT'S INSIDE?

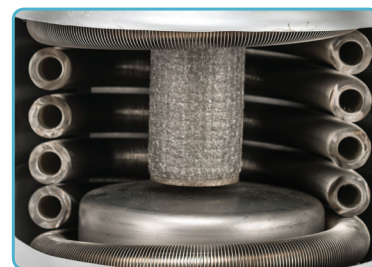


BURNER SYSTEM

- Features a radially fired, downward-blowing, premixed burner with a negative pressure gas valve and plenum design
- Delivers a more stable flame under a wide range of operating conditions, including low gas pressure, wind and non-equal pressure zone terminations
- Easily converts from natural gas to LP with the turn of a screw—no additional parts required and one SKU for easier inventory management

316L FLEX HEAT EXCHANGER

- Floats freely and acts like a spring to accommodate all thermal shocks and stresses
- Made of 316L stainless steel for superior corrosion and erosion resistance
- Self-descaling heat exchanger design prevents scale buildup



- No welds on the water side ensure robustness to chlorides
- Low pressure drop compared to other tankless designs
- Energy reduction up to 40%+ compared to tank-type water heaters and 15%+ over non-condensing water heaters

EASY-ACCESS CONNECTIONS

- Thermostat/pump/outdoor reset

WATER INLET STRAINER

- Strainer included and factory installed on the units to deliver debris-free inlet water to the system

INTELLIGENT CONTROLS

- Units can be set to control temperature or allow maximum flow delivery—ideal for short duration demand spikes or large commercial dump loads tied with storage tanks
- After every firing cycle, system circulates internally to equalize temperature, eliminate hotspots and prevent scale (pump models only)

PERFORMANCE

- Units allow for maximum domestic hot water supply while SIMULTANEOUSLY delivering up to 125,000 btu/h of space heating with no three-way valve to fail
- Combines the commercially proven 316L flex heat exchanger and integral pump with a plate-type heat exchanger for seamless space heating
- Plastic vent temperature overshoot control maintains safe stack temperature below the vent's maximum temperature rating
- Simple install with self-learning and outdoor auto-reset for the most comfort and maximum savings
- Eliminates need for a primary/secondary loop setup and large space requirements of a boiler/storage tank installation
- No low loss header system needed

SELF-LEARNING RECIRCULATION

Use Intellihot under-sink valve (part # IGT-SPR-0061)

- Get instant hot water (eliminates water waste) for any application
- Zero flow-rate activation

HEATED BUFFER TANK

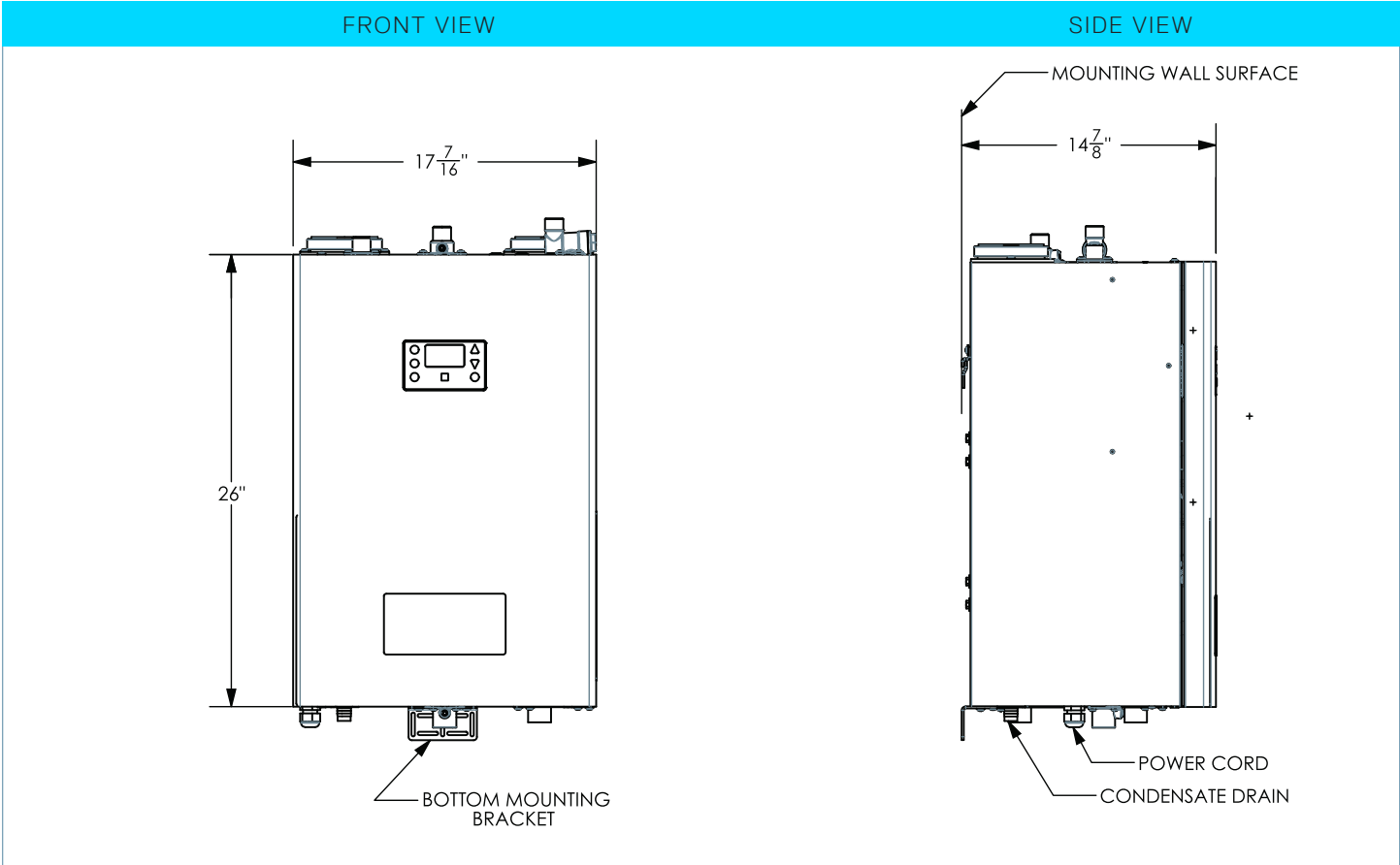
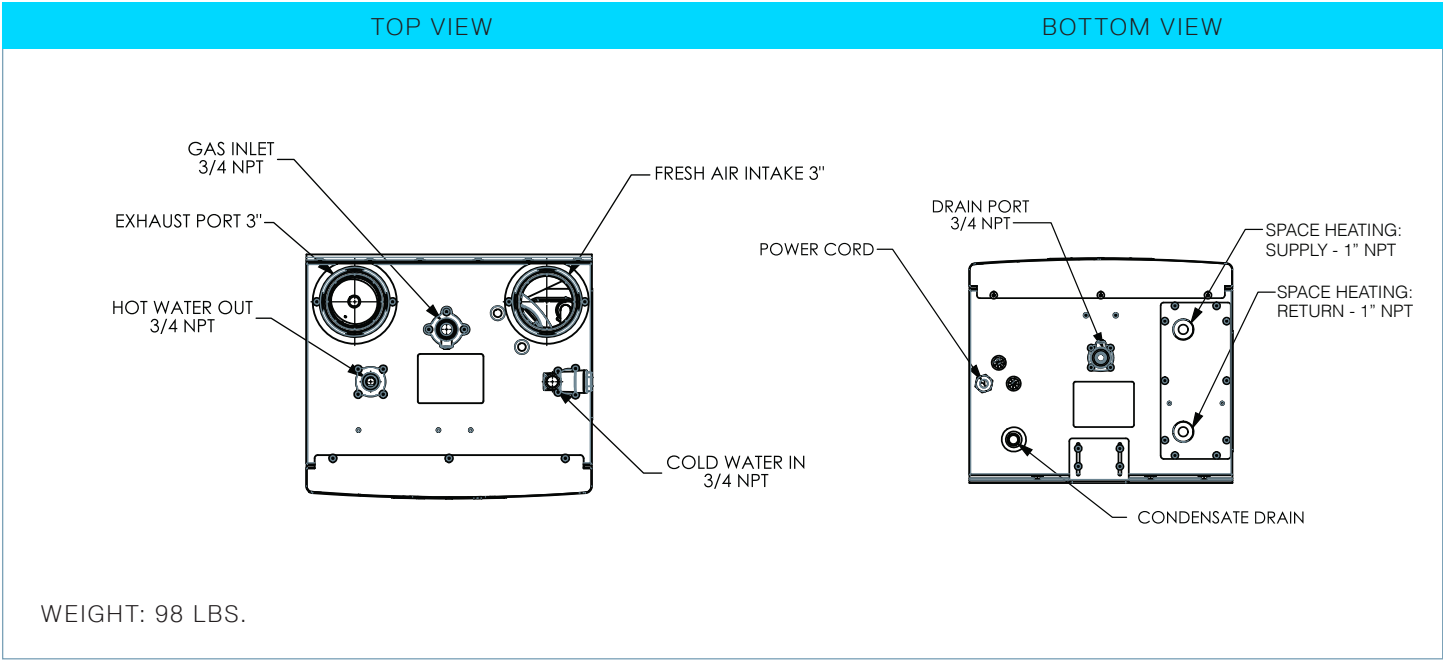
- Integrated half-gallon buffer tank eliminates temperature spikes and cold-water sandwiches
- $\pm 2^{\circ}\text{F}$ temperature stability

PLATE-TYPE HEAT EXCHANGER (PTHE)

- Dedicated ASME-rated, stainless brazed plate heat exchanger for space heating capable of up to 125,000 btu/h
- Separates domestic hot water from the space heating side to maintain safety and integrity of the domestic side



COMBI DIMENSIONS



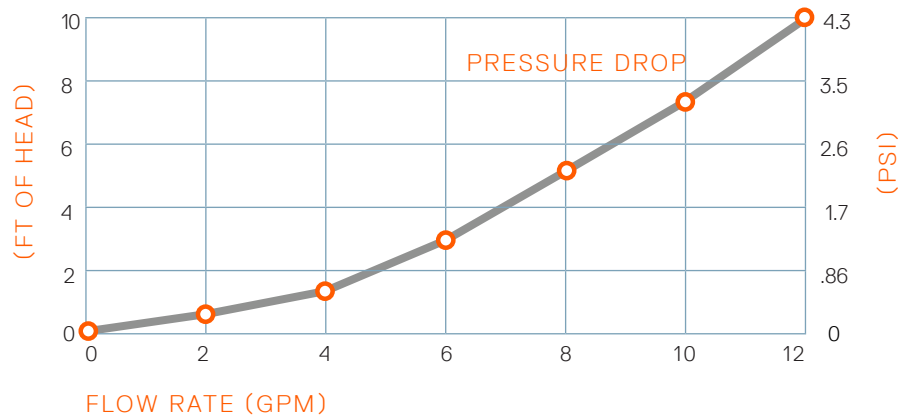
SPACE AND WATER HEATING PERFORMANCE

Model ¹	Space Heating input(MBH)		Heating Capacity ² (MBH)	AFUE (%)	DHW Capacity @ 77°F temp. rise (GPM)
	Min	Max			
i200X / i201X	30	142	125	90.2	5.0
i250X / i251X	30	142	125	n/a	6.0

¹ Ratings are the same for Natural Gas or if field converted to Propane.

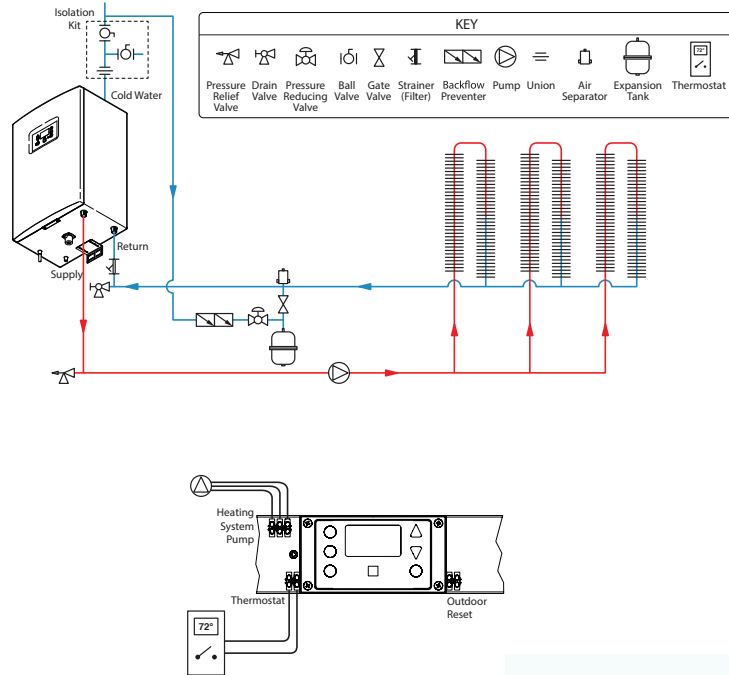
² Capacity based on test carried out by a nationally accredited lab and tested in accordance to the U.S. Department of Energy (DOE) test procedure 10CFR Section 430.23(n).

SPACE HEATING SIDE - PRESSURE DROP

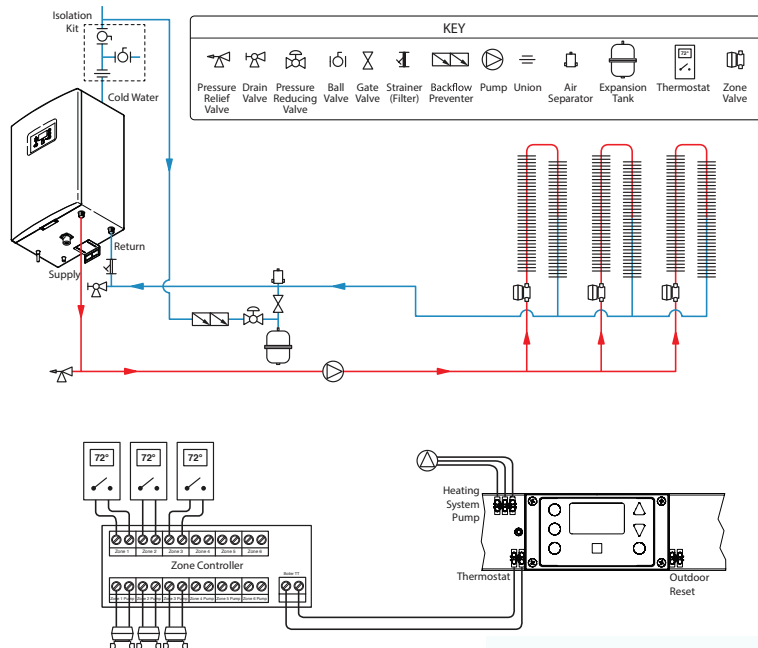


PIPING CIRCUITS

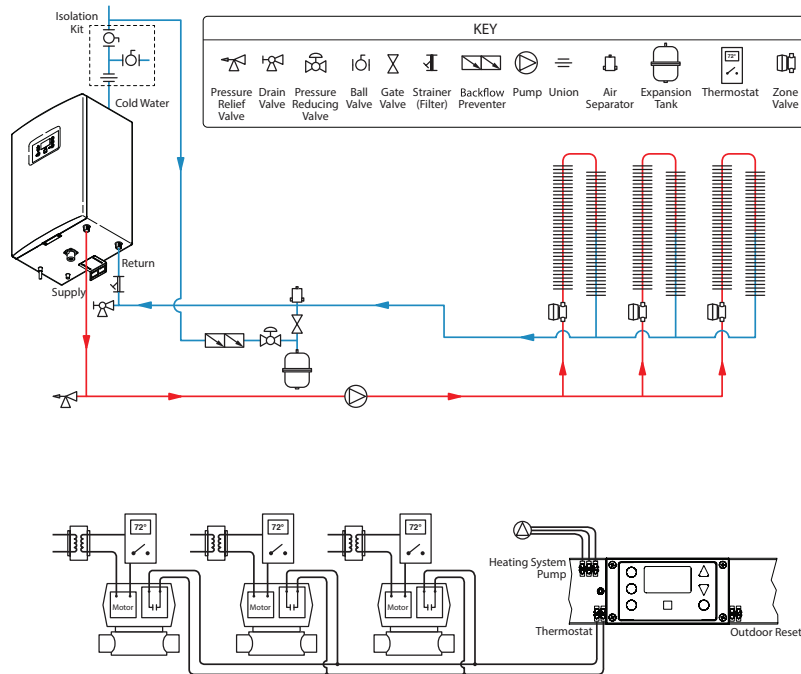
Single Zone, Single or Multiple Loop Baseboard



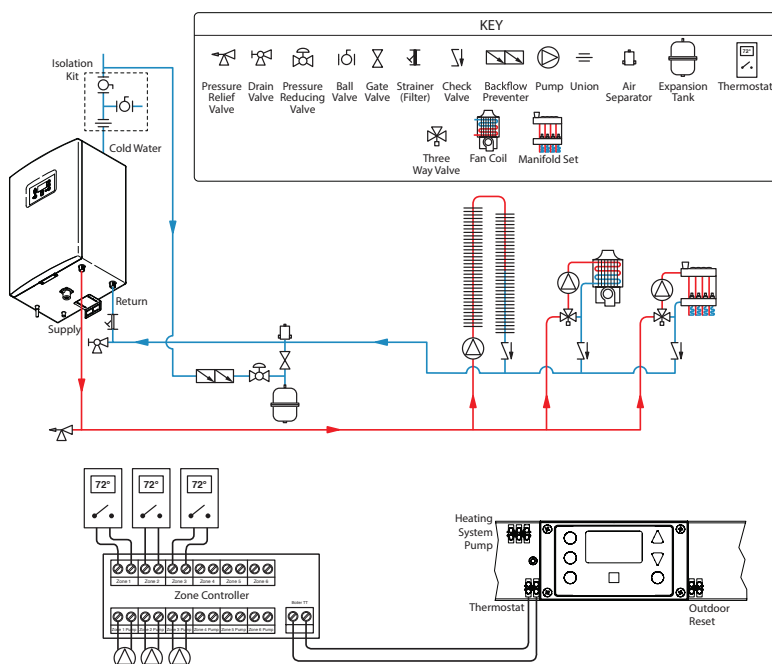
Single Pump, Multiple Zones, Multiple Loop Baseboard, Using External Valve Controller



Single Pump, Multiple Zones, Multiple Loop Baseboard, Using Individual Thermostats



Multiple Zones with Multiple Heating Systems, Multiple Temperatures, Using External Zone Pump Controller and Individual Thermostats



PIPING CIRCUITS

Combi Specifications

PARAMETERS	MODEL	
	i200X/i201X*	i250X/i251X*
Type	Indoor, Wall-Hung, Fully Condensing, Direct Ignition	
Fuel	Preset for NG / LP Convertible	
Minimum / Maximum Input (Btu/h)	30,000 / 199,950	30,000 / 250,000
Thermal Efficiency	94%	92%
Energy Factor	0.93	N/A
Appliance Annual Fuel Utilization Efficiency (AFUE)	90.2%	N/A
Combined Appliance Annual Fuel Utilization Efficiency (CA-FUE)	91.4%	N/A
Dimensions H X W X D (inches)	26 X 17.4 X 14.9 (3.9 cu. ft)	
Weight	98 lbs	
Water and Gas Connections	3/4" NPT	
Space Heating Connections	1" NPT	
Minimum Flow Rate	No minimum flow rate in learned or programmed modes	
Venting Materials	Sch. 40 PVC, Sch. 40 CPVC, Polypropylene, Stainless Steel	
Max 3" Vent Length - Single Pipe / Power Vent	200 ft, deduct 5 ft per 90° elbow	130 ft, deduct 5 ft per 90° elbow
Max 3" Vent Length - Two Pipe / Direct Vent	100 ft, deduct 5 ft per 90° elbow	65 ft, deduct 5 ft per 90° elbow
Max 2" Vent Length - Single Pipe / Power Vent (2" not allowed at elevations above 4,000 ft)	26 ft, deduct 5 ft per 90° elbow	N/A
Max 2" Vent Length - Two Pipe / Direct Vent (2" not allowed at elevations above 4,000 ft)	21 ft, deduct 5 ft per 90° elbow	N/A
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	
Water Pressure Min / Max (PSI)	30 / 150	
NG/LP - Minimum Static Gas Pressure 1/2" Black Iron (non-corrugated)	5"	6"
NG/LP - Minimum Static Gas Pressure 3/4" Black Iron (non-corrugated)	2.5"	
NG/LP - Maximum Static Gas Pressure	14"	
Gas Pressure for Adjustments	8" for NG, 11" for LP	
Electrical	120V AC, 60 Hz	
Power Consumption	500W (Max 4.2 Amps), 8W (Standby)	
FEATURES & PERFORMANCE	i200X/i201X*	i250X/i251X*
Space Heating Heat Exchanger	Stainless Brazed Plate, Maximum Flow 15 GPM	
Domestic Water Heat Exchanger	Stainless 316L	
Hot Water Capacity (35F Rise)	10.8	13.2
Hot Water Capacity (45F Rise)	8.4	10.3
Hot Water Capacity (77F Rise)	5.0	6.0
Domestic Hot Water Temperature Settings	100 – 140°F	
Space Heating Temperature Setting	100 – 180°F	
Warranty as of Jan 31, 2016 (with recirculation, and unlimited thermal cycles)	Residential: Heat Exchanger Coil – 12 years, Parts – 3 years, Labor – 1 year	

*ASME "H" certified



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Note: Due to Intellihot's policy of continuous product improvements, design and technical specifications are subject to change without notice. Version 10.22.2016