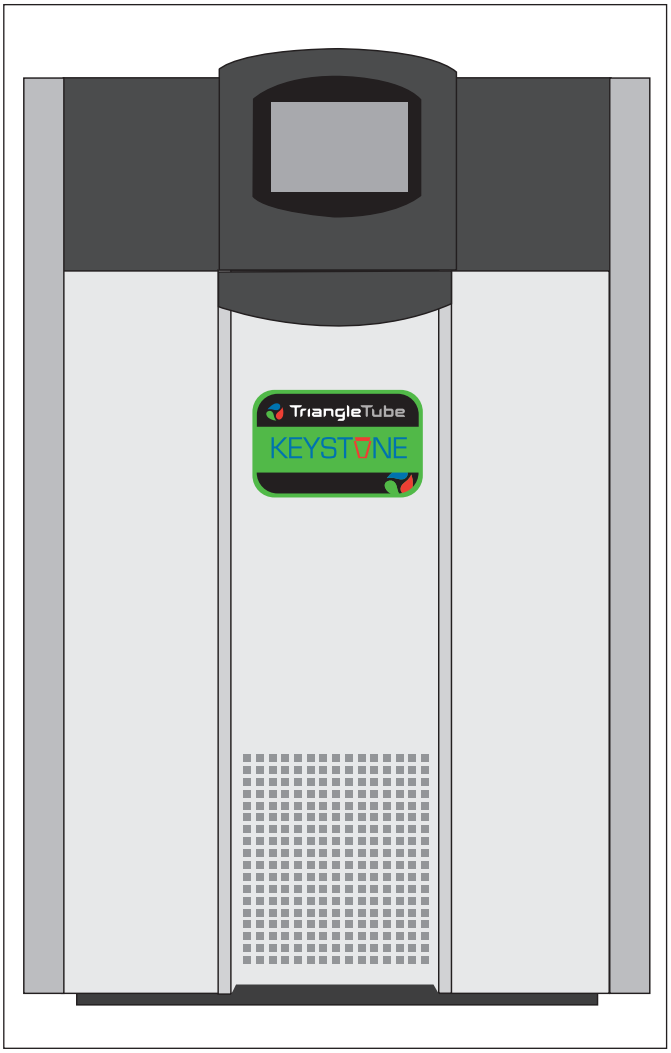
Engineering Submittal

Keystone Water Heater
KW 1000 - 1200



Engineering Submittal Data

- High efficiency condensing water heater
- Electronic PID modulating control with large color touchscreen display
- Displays holds, alerts, and errors in clear text
- Complete diagnostics for analog and digital inputs
- Accepts external analog modulation signal
- Built-in cascade function for up to four Keystone water heaters
- Modulation down to 10% of full fire (10:1 turndown)
- Sealed combustion chamber
- Pre-mix stainless steel burner
- Low NOx - 2012 SCAQMD certified
- Horizontal or vertical direct vent
- Vent and combustion air pipe lengths of up to 100'
- Built-in condensate trap
- Vent temperature cutoff feature
- Direct spark ignition system
- 160 psi maximum working pressure
- Stainless steel heat exchanger with welded construction (no gaskets)
- ASME "H" stamp
- 125 psi (861 kPa) ASME Rated pressure relief valve
- Water flow switch
- Temperature & pressure gauge
- Alarm output
- On/off service switch
- Manual reset high temperature limit
- Burner site glass
- 5 year limited warranty on heat exchanger

Project / Location _____ **Date** _____

Consulting Engineer/ Architect _____

Mechanical Contractor _____

Notes _____

Sizing Data

Model	Input MBH [kW]	Output MBH [kW]	Thermal Efficiency %	Gas Conn. Size Inches	Water Conn. Sizes Inches	Shipping Weight Lbs [Kg]
KW 1000	1000 [293]	950 [278]	95	1-1/2 NPT	2 NPT	620 [281]
KW 1200	1200 [351]	1140 [333]	95	1-1/2 NPT	2 NPT	640 [290]

Vent System Data

Model	Intake (Air) Pipe	Exhaust (Vent) Pipe	Maximum Allowable Equivalent Length* Ft [m]
KW 1000	6"	6"	100 [30]
KW 1200	6"	6"	100 [30]
Installations in the U.S. require exhaust vent pipe that is a combination of PVC & CPVC complying with ANSI/ASTM D1785 F441, polypropylene pipe that complies with ULC S636, or stainless steel complying with UL1738. Installations in Canada require exhaust vent pipe that is certified to ULC S636. Note: The first 12" (30cm) of vent must be CPVC if using a PVC vent system			
Intake (air) pipe may be ABS, PVC, CPVC or galvanized material.			
Closet and alcove installations do not allow the use of PVC under any circumstances			
* To calculate max equivalent length, measure the linear feet of the pipe, and add 5 feet (1.5m) for each elbow used.			

Recovery Data

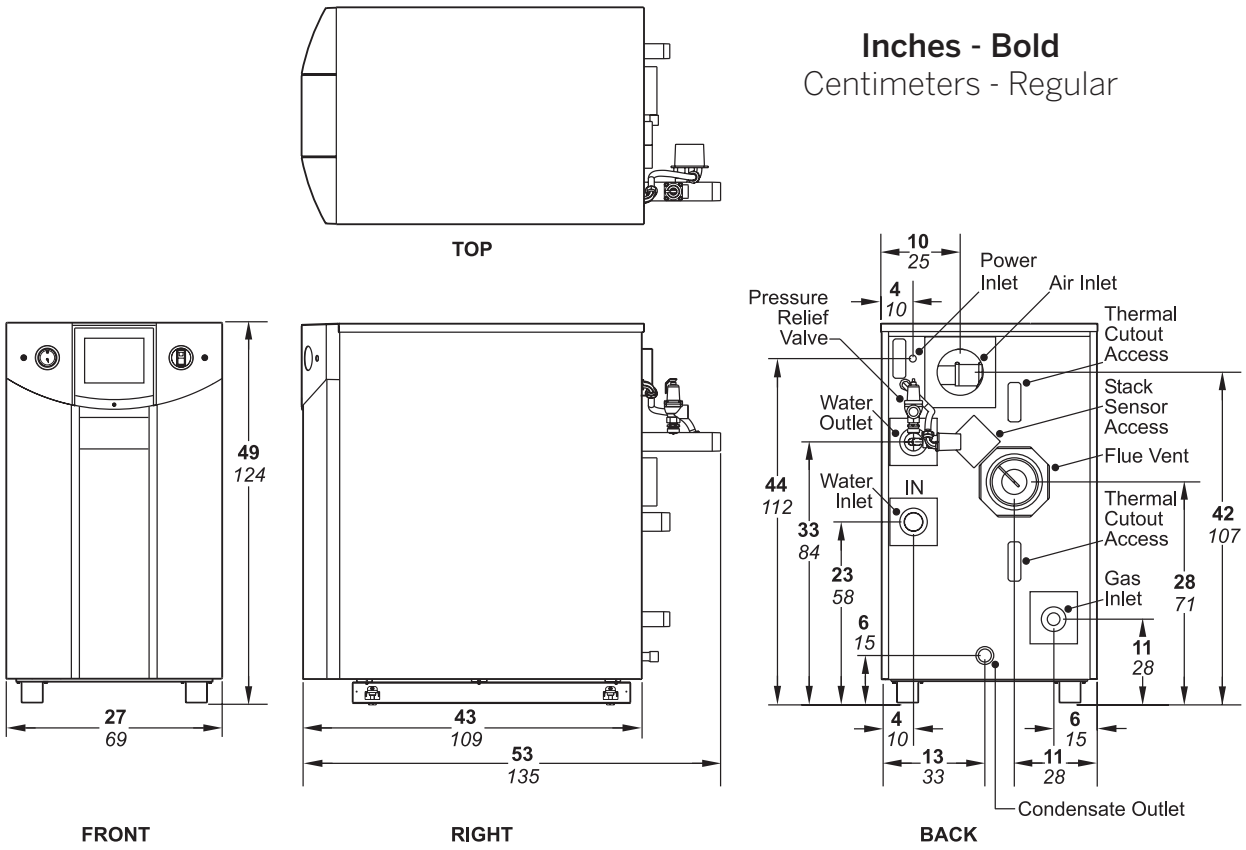
Required Water Temperature Rise GPH Delivered [L/H Delivered]									
Model	40°F [22°C]	50°F [28°C]	60°F [33°C]	70°F [39°C]	80°F [44°C]	90°F [50°C]	100°F [56°C]	120°F [67°C]	140°F [78°C]
	Flow gph [L/h]	Flow gph [L/h]	Flow gph [L/h]	Flow gph [L/h]	Flow gph [L/h]	Flow gph [L/h]	Flow gph [L/h]	Flow gph [L/h]	Flow gph [L/h]
KW 1000	2857 [10799]	2286 [8641]	1905 [7201]	1633 [6173]	1429 [5402]	1270 [4801]	1143 [4321]	952 [3599]	816 [3084]
KW 1200	3420 [12927]	2736 [10369]	2280 [8641]	1954 [7407]	1710 [6482]	1520 [5761]	1368 [5185]	1140 [4319]	977 [3701]

Water Flow Requirements

Model	Flow gpm [lpm]	H/L feet [m]	Temp Rise °F [°C]
KW 1000	95 [359]	30 [9]	20 [11]
KW 1200	114 [430]	37 [10.8]	20 [11]

Note: Maximum allowed Water Hardness of 10 grains per gallon

Dimensional Data



Clearance and Electrical Data

Appliance Surface	Suggested Service Access Clearance inches [cm]	Clearance to Combustibles inches [cm]
Left Side	12 [30]	0 [0]
Right Side	18 [46]	0 [0]
Top	24 [61]	8 [20]
Back	24 [61]	0 [0]
Front	24 [61]	2 [5.1]
Vent	N/A	1 [2.5]

Model	Volts	Phase	Amps	Pump Connections Ratings
KW 1000	120	Single	10	Max 7.4 FLA
KW 1200	120	Single	12	Max 7.4 F:A