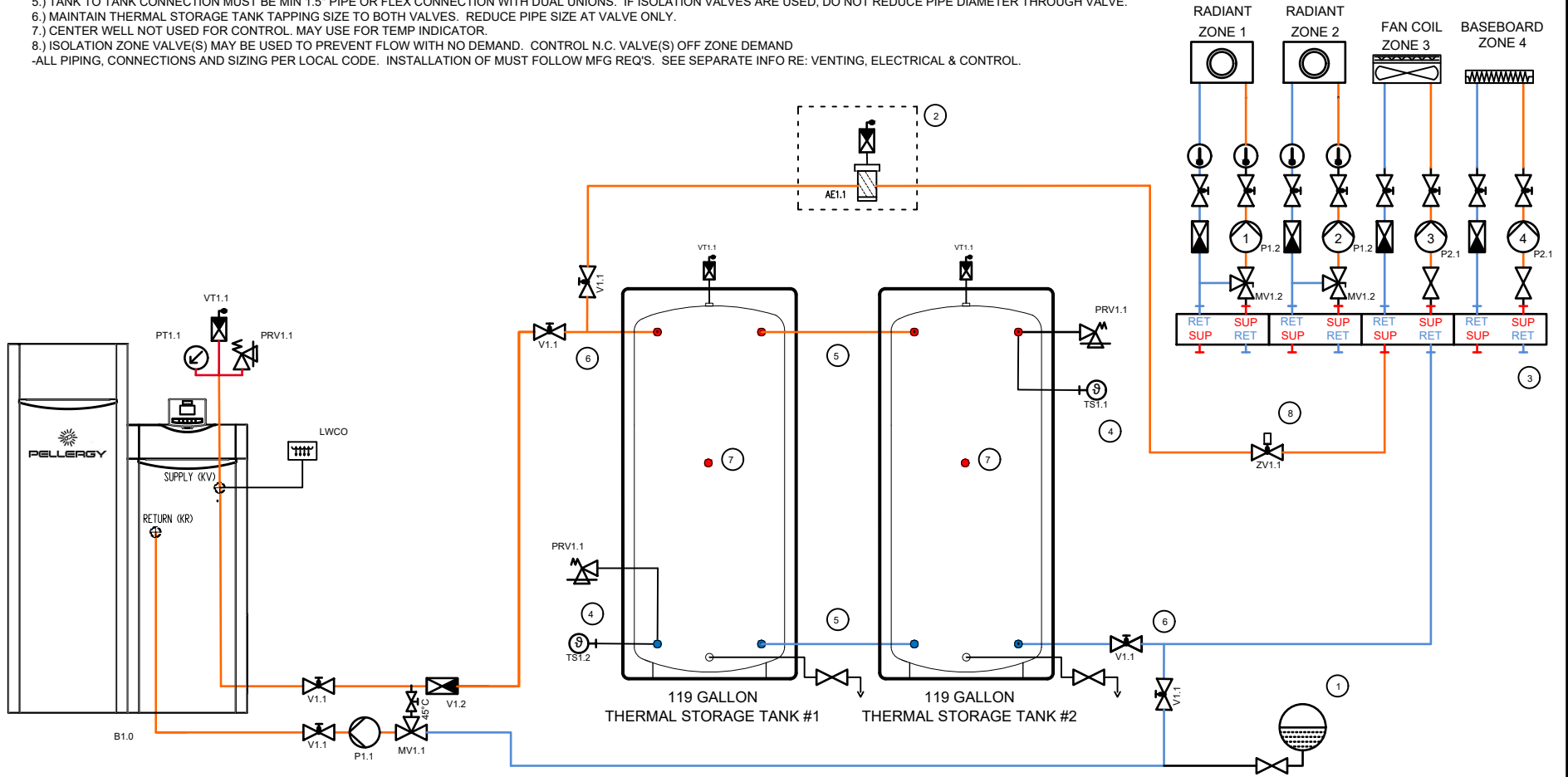


NOTES

- 1.) EXPANSION TANK SIZING PER CALCULATIONS. IF MORE THAN ONE EXPANSION TANK IS USED, CONNECT TO THE SAME POINT IN THE SYSTEM.
 - 2.) AIR SEPARATION AND PARTICULATE SCREEN REQUIRED. MAY BE A COMBO UNIT. LOCATION AS DETAILED IN HIGH POINT OF SYSTEM.
 - 3.) SUPPLY & RETURN MANIFOLD PER FIELD INSTALLATION. MIXING VALVES REQUIRED FOR RADIANT ZONES.
 - 4.) THERMAL STORAGE TANK SENSORS MUST BE LOCATED IN DEEP WELL BENEATH INSULATION WITH SENSOR IN TANK WATER.
 - 5.) TANK TO TANK CONNECTION MUST BE MIN 1.5" PIPE OR FLEX CONNECTION WITH DUAL UNIONS. IF ISOLATION VALVES ARE USED, DO NOT REDUCE PIPE DIAMETER THROUGH VALVE.
 - 6.) MAINTAIN THERMAL STORAGE TANK TAPPING SIZE TO BOTH VALVES. REDUCE PIPE SIZE AT VALVE ONLY.
 - 7.) CENTER WELL NOT USED FOR CONTROL. MAY USE FOR TEMP INDICATOR.
 - 8.) ISOLATION ZONE VALVE(S) MAY BE USED TO PREVENT FLOW WITH NO DEMAND. CONTROL N.C. VALVE(S) OFF ZONE DEMAND
- ALL PIPING, CONNECTIONS AND SIZING PER LOCAL CODE. INSTALLATION OF MUST FOLLOW MFG REQ'S. SEE SEPARATE INFO RE: VENTING, ELECTRICAL & CONTROL.



PELLERGY LLC	Order/offer:	Date: 22 APR 2017	Installer: LOCAL HVAC INSTALLER	Pellergy Alpha A-100 BOILER AND THERMAL STORAGE PIPING DETAIL SAMPLE DRAWING	SCALE: NTS
WWW.PELLERGY.COM	Planner/engineer A.BOUTIN		Customer: #1 CUSTOMER		
Drawing: System Nr. ALPHA					OF H1 Pages

A Technical Introduction to the Alpha Boiler

Dear Potential Pellergy Certified Installer:

The most important requirement for the installation of a Pellergy Alpha Series boiler is proper sizing. Most conventional fossil fueled boilers are oversized for the envelope they are heating, and a pellet boiler needs to be sized for the load it is serving. We ask potential customers for historical fuel usage, square footage of the home, installed linear feet of baseboard and several other indicators of system load to properly size the boiler. Pellergy will assist you in the initial efforts to properly size the Alpha boiler and quote the system installation.

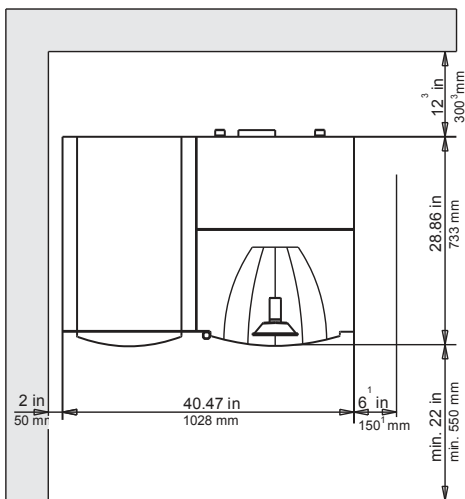
The Pellergy Alpha boiler is manufactured in Austria and meets the current UL, ASTM and European Pressure Vessel standard: EN 303-5. Please review your local codes regarding pressure vessel certification. EN 303-5 is accepted in many States and municipalities, yet others require an ASME pressure vessel.

The Pellergy Alpha boiler requires a dedicated 120VAC, 60Hz, 20A Single Phase circuit. This is standard US Voltage and Frequency. The boiler requires a single dry contact input signal (T-T) for firing. Based on the status of that signal, the boiler will control its own firing rate, modulation and provides command signals for a boiler primary pump.

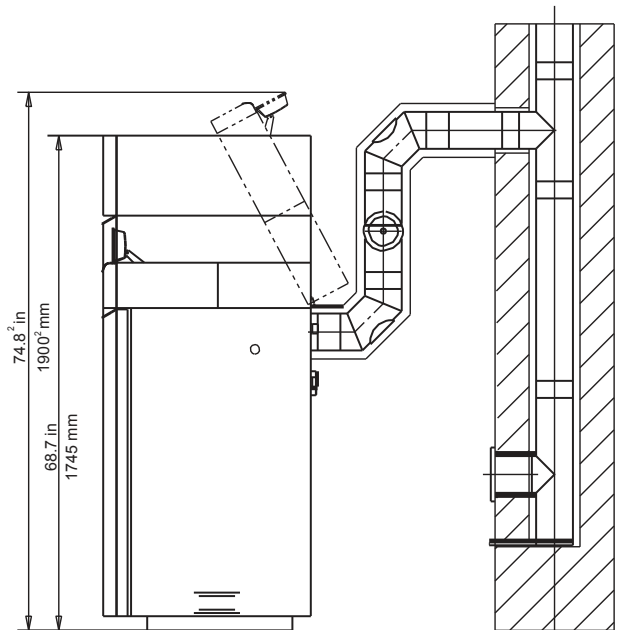
The Pellergy Alpha boiler provides a 1" NPT supply and return connection. The installing contractor must provide a 30psi (max) pressure relief valve, pressure gauge and all near boiler piping. The boiler is compatible with all hydronic heating systems and can be used with an air handler in hot air systems.

The Alpha boiler must be installed in an indoor environment, it is not suitable for outdoor installation without weather protection and protection from freezing. The figure below provides you with installation dimensions and required clearances for the boiler. The boiler must be installed on a non-combustible floor. The boiler requires a standard 6" Class A chimney, though a Power Vent option is available. Local codes may mandate an All-Fuel chimney for wood pellets. A barometric damper is required.

All dimensions in inch / mm:



Pellergy Alpha Series – view from above



Pellergy Alpha Series - Folding up control panel for annual cleaning



The Pellergy Alpha boiler ships fully assembled and crated for protection within a wood frame, mounted to a wooden pallet. The weight of the palletized, crated boiler is 895LBS. There are two “sizes” of Alpha Boiler; however, the size refers to the firing rate and output only. The physical dimensions of both are the same.

Below is a table showing boiler size and output for both LOW and HIGH firing rates and modulation down to its lowest level of 30% of full firing rate.

Pellergy Alpha Series Sizing and Modulation				
Boiler Size (Set Point)	Input Firing Rate	100% Output	50% Output	30% Output
A-60 (High)	60,000 btu/hr	51,210 btu/hr	25,605 btu/hr	15,363 btu/hr
A-60 (Low)	48,000 btu/hr	34,140 btu/hr	17,070 btu/hr	10,242 btu/hr
A-100 (High)	100,000 btu/hr	88,764 btu/hr	44,382 btu/hr	26,629 btu/hr
A-100 (Low)	80,000 btu/hr	71,694 btu/hr	35,847 btu/hr	21,508 btu/hr

Pellergy requires the use and installation of thermal storage with the Alpha Series boiler. The A-60 requires a single 119-gallon thermal storage tank, and the A-100 requires two, 119-gallon tanks. Provided with this writeup are two sample piping schematics; one for the A-60 and one for the A-100. Based on specific information provided by you, the installer, Pellergy will provide a system schematic and design description document tailored to your specific installation.

The Pellergy Alpha Series only requires customer maintenance once every 2-3 tons of pellets burned. This takes about 5-minutes. Once a year, the boiler requires a full service by the installer; a routine that takes about one hour to accomplish. We will be posting YouTube videos of these procedures soon. We are available to you 24/7/356 for technical support.

If you have any questions regarding our boilers, please feel free to contact me.

Signed:

Andrew L. Boutin,
General Manager

andy.boutin@pellergy.com

