

THERMAL STORAGE

Why couple thermal energy storage with heating equipment that utilizes cord-wood fuel. Doing such yields **significant benefits** when one is trying to utilize a difficult to control fuel:

- Eliminates combustion short cycling thus reducing emissions. Wood produces maximum emissions during “start up” and “idle” cycles in conventional non-thermal storage systems. By minimizing the on/off cycle maintenance is also reduced.
- Allows any burner to be set up for steady state “**close to optimal**” **combustion** as the burner does not have to vary output based on a heating load. The burner simply “charges” the thermal storage.
- Allows a **continuous match** of heat output to a buildings variable heating load. This is particularly important during Spring and Fall when a typical wood burner is grossly oversized because it was sized to match the largest winter heating load.
- Allows **interfacing** wood with **off peak, time of day and interruptible electrical** heating. This provides a convenient “back up fuel” at a cost less than fuel oil or propane in many locations.
- Allows simple **connection to** fan coil units, hot water baseboard, European radiators and radiant floor heating systems with a one **GARN WHS** thermal storage unit.
- Allows for **maintenance or cleaning without a loss of heating** ability because the thermal storage can carry the heating load for a period of hours without input.

Integral thermal storage provides a lower first cost, easier installation, greater efficiency and greater safety. With *non-pressurized* thermal storage, the benefits increase because safety is further improved and some equipment is not required: air separator, pressure reducing fill valve, back-flow preventer and expansion tank.

GARN WHS® wood heating equipment with integral non-pressurized thermal storage has **SOLVED** many wood heating problems and yielded consistent **CUSTOMER BENEFITS**:

- An overall, **independently** verified efficiency of 81% - lower wood fuel consumption.
- An **independently** verified emissions output **57% lower** than required by EPA – healthier environment.
- Increases safety by not requiring an active fire overnight – greater peace of mind.

Learn more about **quality** wood equipment with over a third of a century of reliable history at www.garn.com