

Heating & Domestic Hot Water Thermal Storage Tanks

Alternative Fuel Boilers proudly offers the STSS line of thermal storage tanks to maximize the heating benefits of your Econoburn™ boiler.

Thermal storage allows you to store excess energy from the boiler that is not immediately needed to heat your home for use later, on demand.

These highly efficient tanks are well insulated and virtually maintenance free. They can also store energy from a thermal solar system to give you the best of all worlds, both wood and solar, to heat your home and domestic water naturally. With sizes ranging from 500 to 1500 gallons, we can match the storage tank to your Econoburn™ boiler to best fit your heating needs.



Easy to install collapsible water tanks...

STSS manufactures water tanks for solar collectors and wood burning boilers.

Collapsible water tanks and low temperature heat exchangers from STSS make it possible to store large amounts of solar/wood energy at lower temperatures and deliver heated water for domestic hot water pre-heat, radiant floors, ducted warm air, and warm water baseboard systems.



Heat exchangers and tanks...

Enjoy the convenience of thermal heat storage along with your Econoburn™ wood boiler. Our boilers deliver 80 to 85% burn efficiency, with virtually no creosote build-up or acid formation. These systems are configured to automatically switch over to back up fuel when the boiler burns down. As well domestic hot water can be supplied year around with wood by firing once a week, depending on typical demand.

The boilers are sized twice the size of the building heating load so one wood loading can heat the building and heat the tank in a 5 or 6 hour burn. Utilizing a typical thermal storage tank installation, you will only have to load the boiler twice a day. This will conveniently maintain your home thermostat setting for 24 hours during the coldest day of the year.

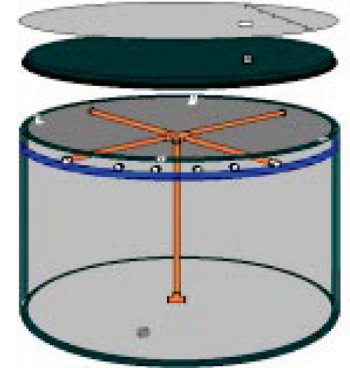
We stock components for 100,000 BTU, 150,000 BTU, 200,000 BTU & 300,000 BTU Econoburn™ boiler sizes. Custom systems are also available by special order.

Thermal Storage Quick Size Table

HEAT LOAD	BOILER SIZE	TANK SIZE	HEX SIZE	BOILER TO TANK	TANK TO HOUSE
50,000 BTU	100,000 BTU	620 GAL	2-120 FT	10 GPM	5-6 GPM
75,000 BTU	150,000 BTU	822 GAL	2-90/90 FT	15 GPM	8-9 GPM
100,000 BTU	200,000 BTU	1205 GAL	3-90/90 FT	20 GPM	10-12 GPM
150,000 BTU	300,000 BTU	1550 GAL	4-90/90 FT	30 GPM	16-20 GPM

Thermal tank features...

- A packaged, fully manufactured, light weight tank, shipped crated 19" wide and 54" high. The length varies with capacity. You can walk it into your home, open the crate and have it ready to fill with water in less than an hour.
- Water can be circulated in a closed loop through the tank heat exchanger, or tank water can be circulated open loop. Use both methods in the same tank if required.
- Distribution can be designed with hydronic baseboard, radiant floors, radiators, or warm-air duct heat exchangers in a furnace or heat pump system where central air conditioning is installed. Combining warm-air and baseboard, for example, is another advantage with this system.
- Multiple zones, both open and closed loops can be operated from the same wood burning boiler and tank system at the same time.
- Conventional 24 volt, EMC controls, reliable and safe hard wired designs are available for switch-over to back up fuels to keep you warm and your home at a set temperature when you are away.



Heat exchanger features...

- Three vertical spiral coiled copper heat exchangers are available and custom made for this variable tank temperature heating application.
- The heat exchange coils are piped singly or in pairs for space heating and heating domestic hot water.
- Coils purge air automatically, critical during the initial system start-up.
- Heat stratification in the tank ensures that the hottest water is delivered.
- Coils are designed to permit a unique piping arrangement. This allows one set of coils to heat the tank (boiler to tank) and heat the house (tank to house), or allows the boiler to bypass the tank and directly heat the house.
- A separate coil (PEX or copper) is used to deliver domestic hot water.

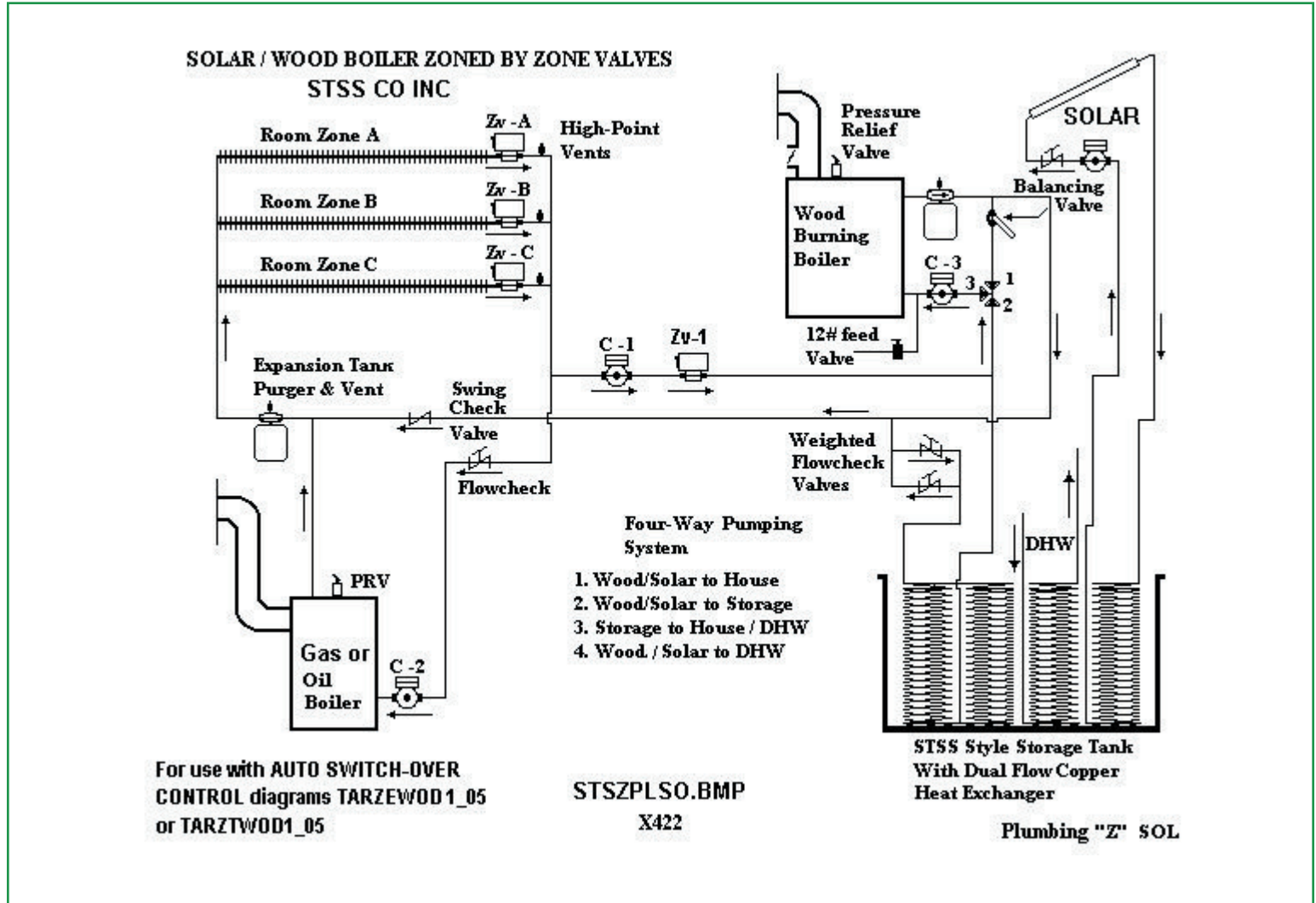
STSS Energy Management Control...

To maximize the efficiency of a combined **Econoburn™** wood boiler and **STSS** thermal heating storage system we have developed the **EMC** control. This control monitors the heating balance point between the heating load and the tank temperature and automatically switches over to the oil or gas backup after every available BTU has been provided by the tank.

Technical Specifications

STSS HEAT STORAGE TANKS	HEAT EXCHANGERS
<p>Insulation: tested, R-19 175 Deg. F</p> <p>Lid Support: Copper cross-tee with center post.</p> <p>Crate: 19" wide, 54" high, length varies with gallons.</p> <p>Penetrations: Above water line 1" & 3/4" copper pass throughs.</p> <p>Penetrations: Below water line 1" FT. copper compression fittings</p>	<p>Copper and Pex with Copper: 21" Diameter X 43" High. 120ft, 180 ft, 90 ft, 60/120 ft, 90/120 ft and 90/90 ft,</p> <p>Pex with copper: 200 ft</p>

Typical Installation Specification Diagram...



Contact us for more information...

Have any questions regarding our **Econoburn™** wood boilers and **STSS** thermal heating storage systems. Contact us by phone toll free or e-mail and ask your **Econoburn™** technical representative for more information.

Visit our website at:

www.alternativefuelboilers.com

Or contact us directly:

Call Toll-Free 1-866-818-5162