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This spec sheet is provided courtesy of Surplustraders.net

If you are looking for brand names, model numbers or other products that are not currently represented in this spec sheet, please, give me a call or send me an email with your requirements so we can further discuss your needs.

Thank you

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Model RSTR24 is a vacuum tube type all stainless steel solar water heater. This is the latest and by far the most efficient solar water heater technology. The collector area consists of 24 double walled vacuum insulated borosilicate (same as Pyrex) glass tubes approximately 60 inches long. Basically, the tubes function like thermos bottles. The outer wall is transparent, while the inner wall has a dark solar absorptive coating. Between the two walls is a vacuum. Sunlight passes through the outer wall and is absorbed by the dark inner wall, thereby heating it. In the middle of the tube is a heat pipe, which conducts the heat to the water (or water/antifreeze mixture) in the super insulated copper header. Because of the vacuum, heat cannot be conducted back out through the collector tubes, so all the collected heat can only go into the header. Because of the heat pipes, there is no water in the glass collector tubes, so even if one breaks, the water will not leak out, and the system will continue to function normally, although with slightly less efficiency.

Normally, the water is circulated by a pump through the header and through a heat exchanger in a remotely located tank. It can alternatively be circulated through a radiant floor heating system, or other storage medium. We also have some all stainless 280 liter (74 gal) insulated tanks with copper heat exchange coils available. The inlet and outlet to the header are standard 1/2" copper tubing (5/8" OD). Collectors can easily be connected in series if you need more capacity. The header is tested to 150 PSI at the factory, and has a working pressure rating of 87 PSI. Normal house pressure is generally around 30-45 PSI.

Normally you will also need a circulating pump and controller for a complete system. We have some pumps and prototype controllers available. Unlike the standard water heaters you can buy anywhere, these are constructed of 100% food grade (304) stainless steel, even including the stand and mounting bolts. Regular water heaters generally have a 5 year warranty, which is about how long they last before rusting out. These should last indefinitely (they have a 20 year factory warranty), and furthermore, you never have to pay for gas or electricity to run them. We have been installing these systems in Central America for the past four years, and are now making them available for use the USA. You will receive; One all stainless steel mounting stand with reflector and stainless hardware. 24 double wall evacuated glass tubes plus 2 spares. 24 heat pipes and tube inserts. Detailed instructions are provided. Additionally, you will probably need (depending on the design of your system) some or all of the following: A storage tank or other storage medium. A pump and controller. Copper tubing and fittings. An expansion tank. Insulation for exposed copper lines. This system should also be usable in a radiant heating system. You will need to calculate the amount of heat required as well the storage necessary to have the collected solar energy available at night and when needed. We have no experience in this application, but would be interested in seeing how such a thing worked out.

If you install one of these systems, you may be eligible for tax credits or other incentives, which vary by location.