

Super Solar Storage Tank

Engineering Specification Sheet

The following shall be the specifications for the solar hot water drain back storage tank. Solar storage tank shall be the Super Solar Storage Tank™ Model # _____
Part # _____.

It shall be an atmospheric-pressure type or non-pressurized type tank.

Tank: The dimensions of the outside dimensions of the tank shall be:

English Measurements:

Metric Measurements

In length _____ inches In length _____ cm

In width _____ inches In width _____ cm

In height _____ inches In Height _____ cm

Tank Capacity: Gallons _____ Liters _____

Insulation: Shall be a minimum of _____ inches or _____ centimeters on the top. The four sides of the tank shall be _____ inches or _____ centimeters. The bottom of the tank shall be _____ inches or _____ centimeters. The insulation material shall be ISO-R insulation with a minimum of one foil faced side to aid in the retention of thermal heat back into the tank body of water. All plumbing fixtures penetrating the tank shall be insulated with closed cell foam insulation.

Tank Construction: Shall be made of non-metallic materials except for screws, which should be stainless steel where metal would come into contact with moisture. The lid shall have NO penetrations and be easily opened for any type of service at a future date should any service be required. The tank shall have an appropriate liner for the intended end use. The liner shall be an industrial liner made of PVC or EPDM. The liner shall be a minimum thickness of _____ mil.

Heat Exchanger: The heat exchanger(s) shall be all-copper submerged in the tank. They shall be single-wall finned copper with a nominal ID of 5/8" and fittings with a 3/4" union or a plain 3/4" copper with a male or female MPT adaptor. Composition of copper shall be Type K material, annealed throughout the entire length. One heat exchanger comes with all tanks for pressurized hot water for domestic hot water usage. Standard heat exchanger is mounted horizontally. Exchangers will be mounted either horizontally or vertically depending on the heat exchangers intended end usage. Heat exchanger shall be mounted to non-ferrous metal so the mounting assembly cannot fail at a future date due to corrosion. All heat exchangers will have thermal sleeves to isolate the copper from the high tank temperatures. All heat exchanger inlets and outlets shall be ABOVE the tank design waterline. The exchangers shall be tested to 100-psi maximum operating pressure.

Lid: Tank lid shall have NO penetrations in the top of the tank. The tank lid shall have EPDM seals between the top of the tank and the bottom lid. The lid shall have easy access and have no screws in the top of the lid. Lid shall be secured by a ratchet strap system to allow for easy access and lid removal.

Ports: All ports in and out of tank shall be below the designed tank water line. Normal ports shall be fitted with 3/4" unions for non-solder connection to tank via all heat exchangers. Normal ports are 1. Solar supply (SS) 2. Solar return (SR) 3. Domestic hot water supply (DHWS) 4. Domestic hot water return (DHWR). All ports shall be labeled on the outside of the tank. All additional ports shall be labeled according to their intended end usage. All tanks will have an overflow port should any heat exchangers leak for any reason.

Overflow port: All tanks shall have one overflow pipe of .50" OD to allow excess water to drain from tank in case of a heat exchanger leak inside the tank.