

Dawn Solar Thermal System Pump Package

General: The solar pump station is a pre-installed and leak-tested unit with fittings for transferring heat from the collector to the storage tank. It contains important fittings and safety devices for the operation of the solar thermal system.

Function: Solar pump stations are used on the primary circuit of solar heating systems to control the temperature of the hot water storage. The pump inside the units is activated by the signal from the differential temperature controller. The units contain the functional and safety devices for an optimal circuit control, and are available with flow and return connection and with return connection only.

- * Ball valves in flow and return in combination with check valves to prevent gravity and thermo circulation
- * Unit for flushing, filling and emptying the system
- * Air vent for manual bleeding of the solar thermal system
- * Flow meter for displaying and setting the flow rate
- * Thermometer in flow and return for displaying both temperatures
- * Pressure gauge for displaying the system pressure
- * Safety relief valve to prevent overpressure
- * Three-speed solar pump for a wide range of flow rates

Suitable for 300-1,000 Square Foot Building Integrated Thermal Array

Technical Specifications

Body	brass
Temperature gauge	steel/aluminium
Seals	PTFE/EPDM
O-Rings	EPDM//Viton
Insulating Shell	EPP; thermal conductivity value = R4

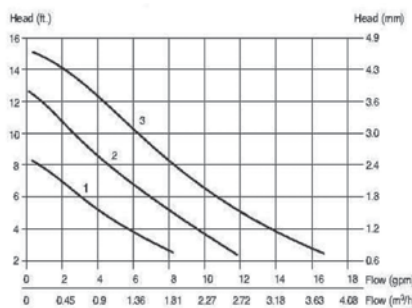
Wilco Pump

Wilco solar model	Star S-16 U15
Body	cast iron
Max pressure	115psi (10 bar)
Max temperature	230°F (110°C)
Agency approval	cULus

Performance

Medium	water, glycol solutions
Max. percentage of glycol	50%
Max. working temperature	360°F (180°C)
Max. working pressure	150 psi (10 bar)
Safety relief valve temp range	-20 to 360°F (-30 to 180°C)
Safety relief valve factory setting	90 psi (6 bar)
Min. opening pressure for check valve	p; ¼ psi (2kPa)
Adjustment range of flow meter	¼ to 5gpm (1 to 20l/min)
Max return flow meter temperature	265°F (130°C)
Pressure gauge scale	D-90 psi (D-6bar)
Temperature gauge scale	32-320°F (0-160°C)
Connections	1" male half union
Filling/drain hose connection	¾"

Wilco Star S-16 U15 Hydraulic Characteristics



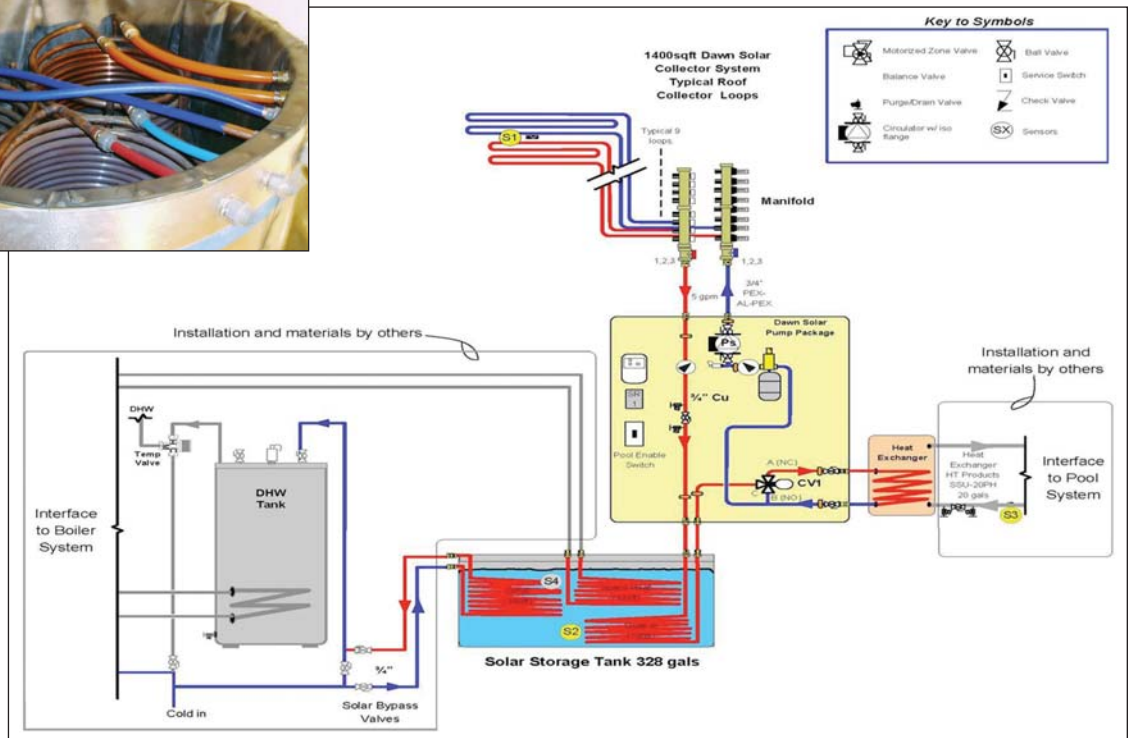
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DSSI Packaged Systems for Solar Storage

- ✦ A factory-manufactured, packaged, light weight tank, shipped collapsed and crated – 24" wide, 54" high with the length varying with the tank capacity.
- ✦ Easily walked into any building through a conventional doorway.
- ✦ Closed loop and open loop configurations.
- ✦ Solar energy can be distributed to radiant floors, hydro-air coils in return air ductwork, domestic hot water and process heating applications.
- ✦ Conventional low-voltage controls, reliable and hardwired designs are available for switch-over to backup fuels.
- ✦ Internal or external heat exchangers are available.



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