

INTEGRATED PUMP STATIONS SAVE SPACE, TIME AND MONEY

A. O. Smith is proud to offer Integrated Solar Pump Stations that simplify installations by combining all necessary measurement, safety, fill, drain, flow and solar system controls into one easy-to-install assembly. These all-in-one assemblies save installing contractors the time it takes to locate, purchase and install these items separately. Integrated pump stations also save space and provide a professional-looking installation that customers will notice and appreciate.

FEATURES

- Integrated solar pump stations - Standard and Double Wall pump stations available.
- Programmable electronic solar system control with advanced diagnostics and LCD display - cTUVus listed.
- Multiple speed pumps - cULus listed.
- Insulated and pre-plumbed all-in-one wall mounted assembly.
- Saves space, time and money – clean professional-looking installation.
- Two Pt-1000 temperature sensors for solar loop and solar booster tank included.
- Flow meter, temperature and pressure gauges.
- Solar loop pressure relief valve.
- Combination ball/check valves in supply and return lines allow easy servicing and prevent gravity thermo circulation.
- Fill, drain, flow control valves - built-in air stripper to trap and remove air from the system manually.
- 120 VAC single phase power - with standard appliance cord/plug.
- Standard Pump Station - for closed loop propylene glycol systems with heat exchangers located external to the pump station.
- Double Wall Pump Station - for closed loop propylene glycol systems when double wall heat exchangers are required by local codes - these models have an integrated stainless steel (double wall) flat plate heat exchanger.
- Double Wall Pump Station includes two circulation pumps - primary solar loop and secondary domestic water loop pumps.
- Double Wall Pump Station includes variable speed pump control and bronze domestic water circulation pump.
- Includes stainless steel flex line and wall mounting bracket for solar loop expansion tank (expansion tanks ordered separately).
- 2 year limited warranty. For complete information, consult written warranty or contact A. O. Smith.



Standard Pump Station



Double Wall Pump Station



Eligible for a 30% Federal tax credit when installed as part of a complete Cirrex® solar water heating system.

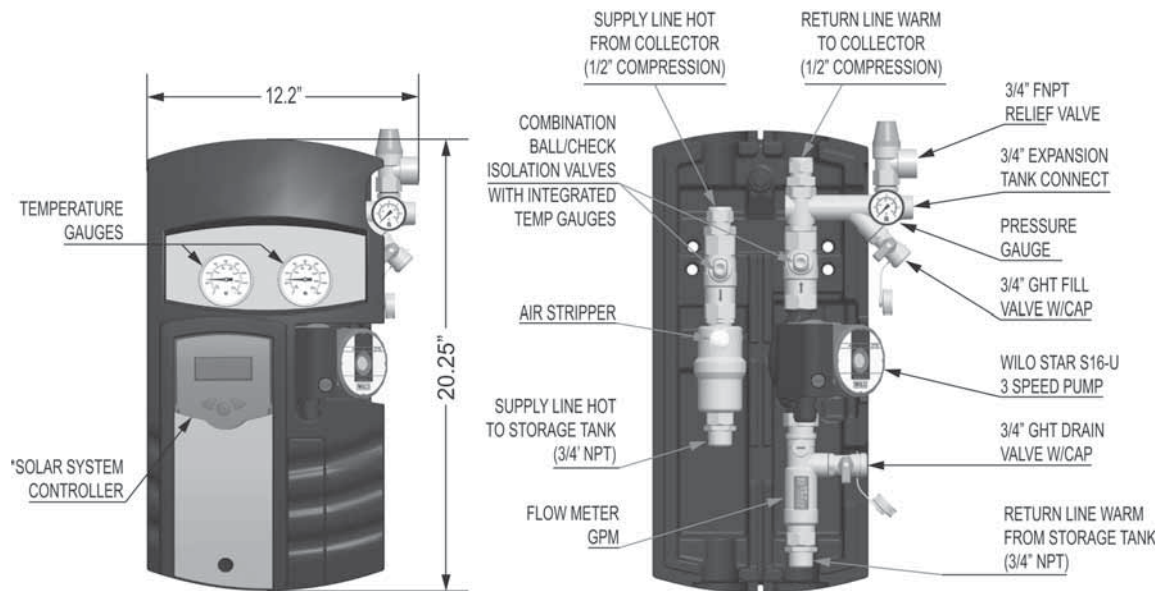
For more information visit www.hotwater.com



Integrated Solar Pump Stations

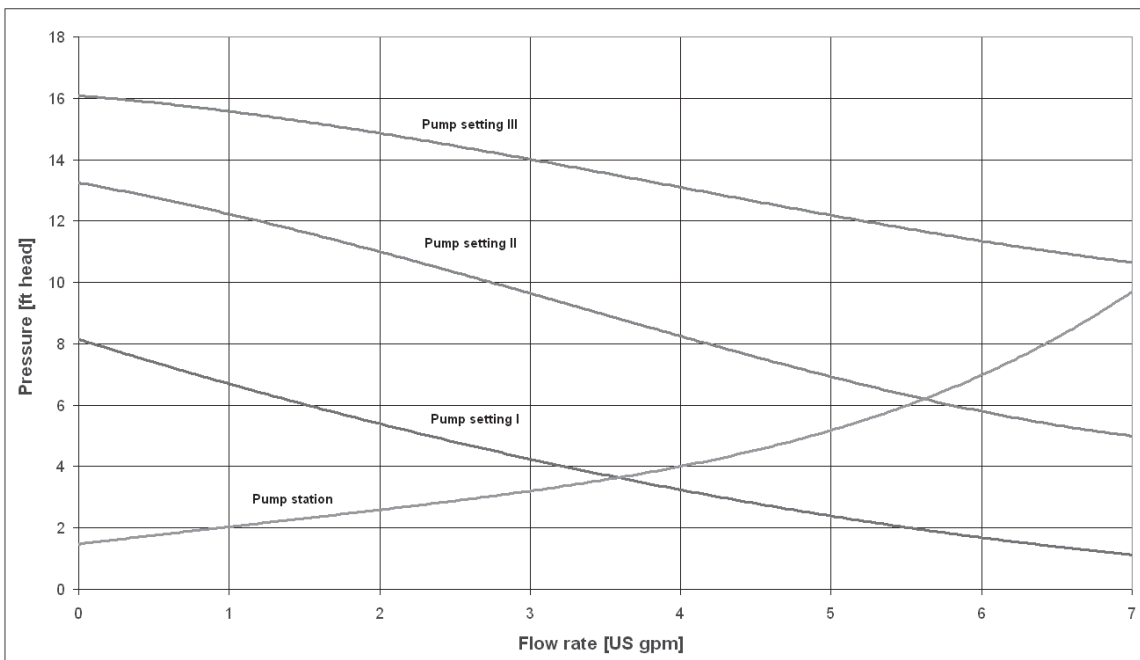
STANDARD PUMP STATION

TECHNICAL DATA							
Part Number	Circulating Pump Model	Integrated Heat Exchanger	Power Requirements	Height (inches)	Width (inches)	Depth (inches)	Weight (lbs)
9910016000	Primary Solar Loop - Wilo Star S16-U	None	2 amp - 120 VAC single phase	20.25"	12.2"	7.64"	20.8



*Ambient air operating temperature range for system control; 32°F to 104°F (0°C to 40°C)

Pump station pressure drop / Wilo Star - S16 Pump Characteristics

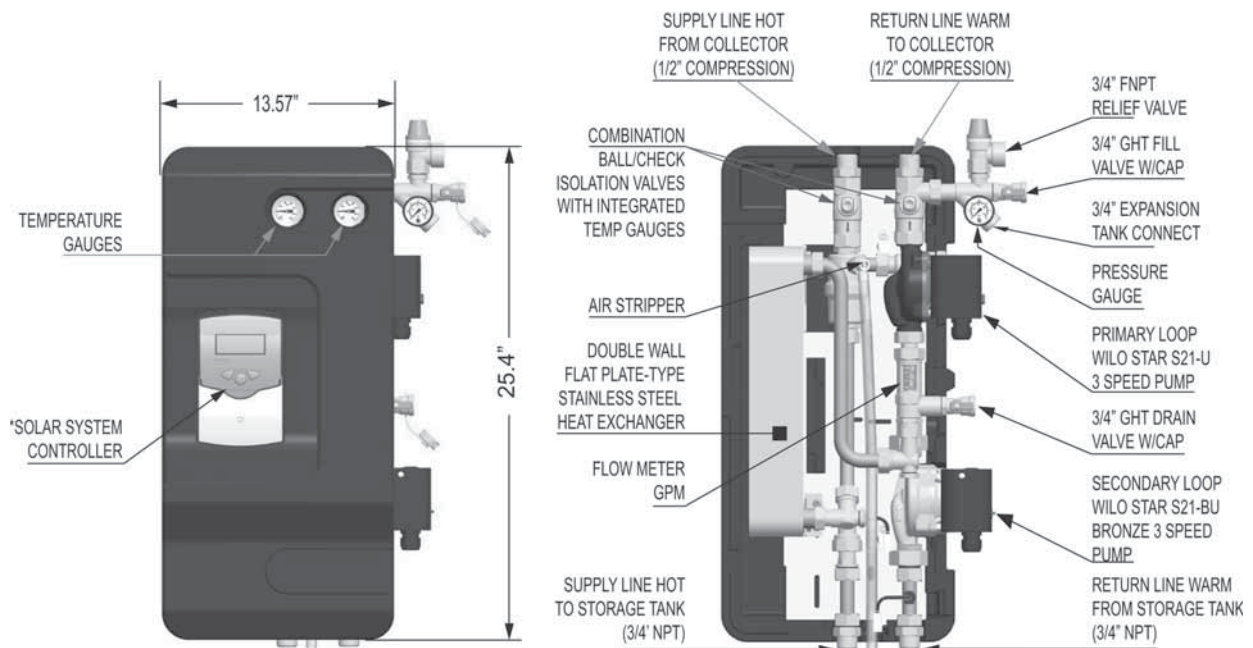




Integrated Solar Pump Stations

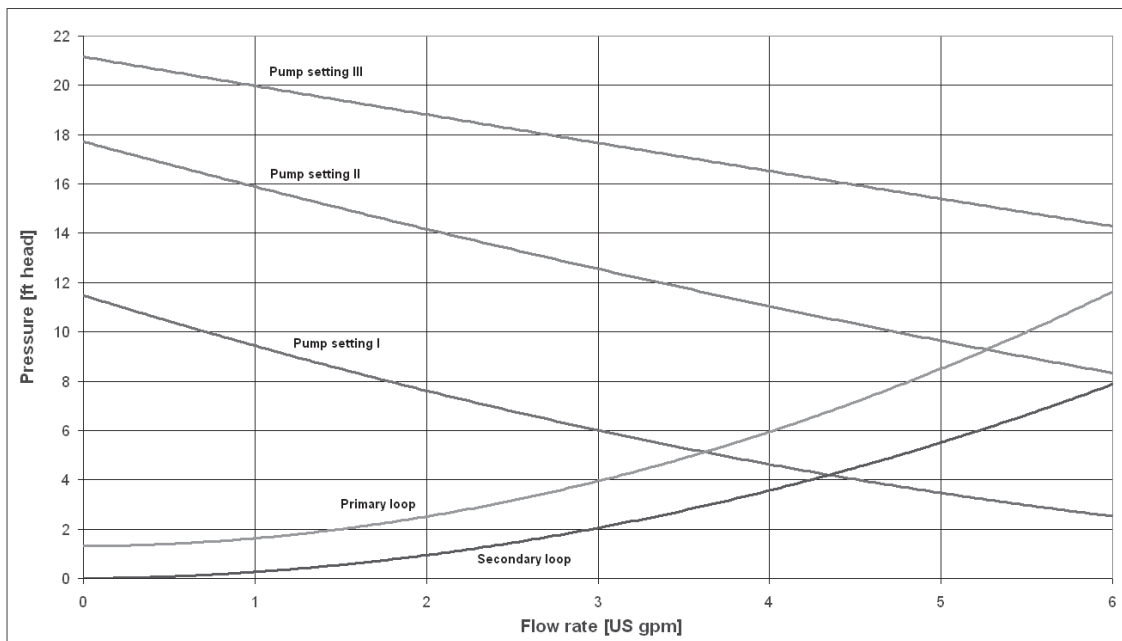
DOUBLE WALL PUMP STATION

TECHNICAL DATA							
Part Number	Circulating Pump(s) Model(s)	Integrated Heat Exchanger	Power Requirements	Height (inches)	Width (inches)	Depth (inches)	Weight (lbs)
9910042000	Primary Solar Loop - Wilo Star S21-U, Secondary Potable Loop - Wilo Star S21-BU (bronze)	Double Wall Stainless Steel Flat Plate-Type	3 amp - 120 VAC single phase	25.4"	13.57"	9.81"	46.8



*Ambient air operating temperature range for system control; 32°F to 104°F (0°C to 40°C)

Pump station pressure drop / Wilo Star - S21 pump characteristics

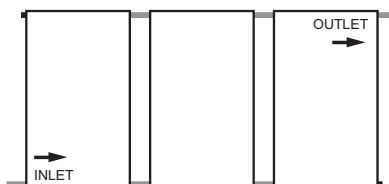


SOLAR COLLECTOR PIPING

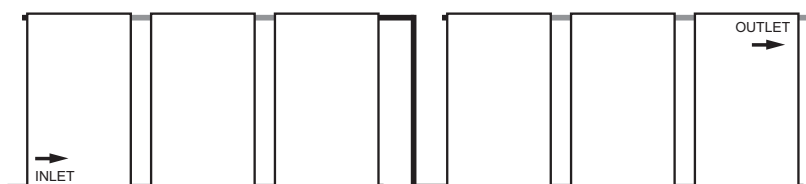
The diagram and table below provides useful information regarding recommended flow rates, the maximum equivalent solar loop piping lengths and the maximum number of solar collectors the Standard and Double Wall pump stations can supply. The diagrams and tables can only be used as a general guide for the 3 models of Chromagen™ solar thermal collectors listed. Use the pump station pressure drop charts on the preceding pages to determine the capabilities of the pump stations with all other solar collector models. Solar loop piping must be insulated and the piping lengths should be installed at the shortest lengths possible to minimize heat loss in the solar loop.

A. O. Smith also offers Cirrex® packaged and pre-engineered 1, 2 and 3 collector solar hot water systems, see specification sheet AOSVE50000. See specification sheet AOSQE50005 for more information on the Chromagen solar collectors listed in the table below. Call 800-527-1953 for further technical assistance.

CONFIGURATION A



CONFIGURATION B



Chromagen Collector Model	Maximum Number Collectors	Piping Configuration Required	Copper Line Size (inches I.D.)	Maximum Equivalent Length (feet)	Maximum Equivalent Length (meters)	Recommended Flow Rate (GPM)
CR-110-AP	1	A	1/2"	400	121.9	0.7
	2	A	1/2"	300	91.4	1.4
	3	A	3/4"	300	91.4	2.1
	4	A	3/4"	300	91.4	2.8
	5	A	3/4"	200	61.0	3.5
	6	B (3+3)	3/4"	250	76.2	2.1
	7	B (4+3)	3/4"	250	76.2	2.8
	8	B (4+4)	3/4"	250	76.2	2.8
	9	B (5+4)	3/4"	200	61.0	3.5
	10	B (5+5)	3/4"	200	61.0	3.5
CR-130-AP	1	A	1/2"	400	121.9	1.0
	2	A	1/2"	150	45.7	2.0
	3	A	3/4"	300	91.4	3.0
	4	A	3/4"	150	45.7	4.0
	5	B (3+2)	1/2"	300	91.4	3.0
	6	B (3+3)	1/2"	250	76.2	3.0
	7	B (4+3)	3/4"	200	61.0	4.0
	8	B (4+4)	3/4"	150	45.7	4.0
CR-140-AP	1	A	1/2"	300	91.4	1.3
	2	A	3/4"	400	121.9	2.6
	3	A	3/4"	200	61.0	3.9
	4	B (2+2)	3/4"	350	106.7	2.6
	5	B (3+2)	3/4"	200	61.0	3.9
	6	B (3+3)	3/4"	150	45.7	3.9