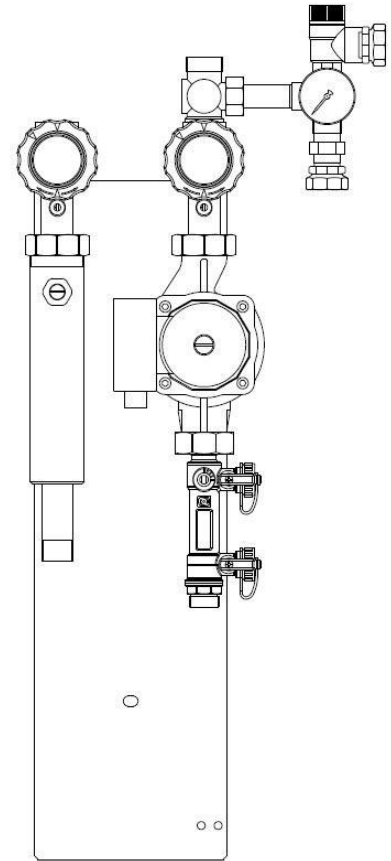


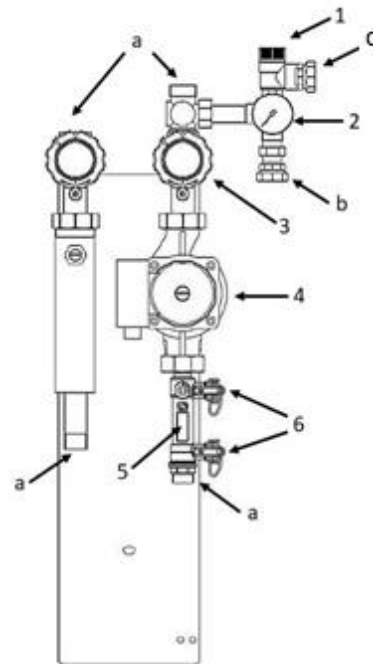
Technical Details	
Model:	UniMaxx-PLUS-SC500-AC-V3
Height with insulation (in)/(mm)	18.66/474
Width with insulation (in)/(mm)	12.13/308.1
Distance Axis/Wall (in)/(mm)	3.94/100.1
Circulation Pump	WILO Star S30 U-25-180 (1/10 HP)
Pipe Connections	¾" Compression
Max. Admissible Pressure (psi)/bar	145/10
Safety Valve (psi)/bar	87/6
Pressure Gauge (psi)/bar	0-87/0-6
Spring Pressure of Non-Return Valve	2 x 0.66' head = 1.32' head
Temperature Gauges (°F)/(°C)	32-320/0-160
Flowmeter (depending on version) (gpm) / (lpm)	1 – 10/3.8 – 37.9
Fittings	Brass
Permissible temperature range (°F)/(°C)	14 – 230/-10 – 110
Mains connection	115/120 V, 60 Hz
Protection class	IP 44
Threaded connection	Rp ½ and Rp 1
Max. operating pressure (psi)/bar	145/10
Power consumption (HP)	1/10 HP
Max Amperage (A)	1.5
Insulation	EPP, $\lambda = 0,041 \text{ W}/(\text{m}^*\text{K})$; max. 120°C continuous; and 180°C intermittent
Materials	
Pump housing	Grey cast iron
Impeller	Polypropylene
Shaft	Stainless steel insulation EPP
Fittings	Brass
Seals	Viton/Teflon
Bearing	Carbon



Certifications & Standards

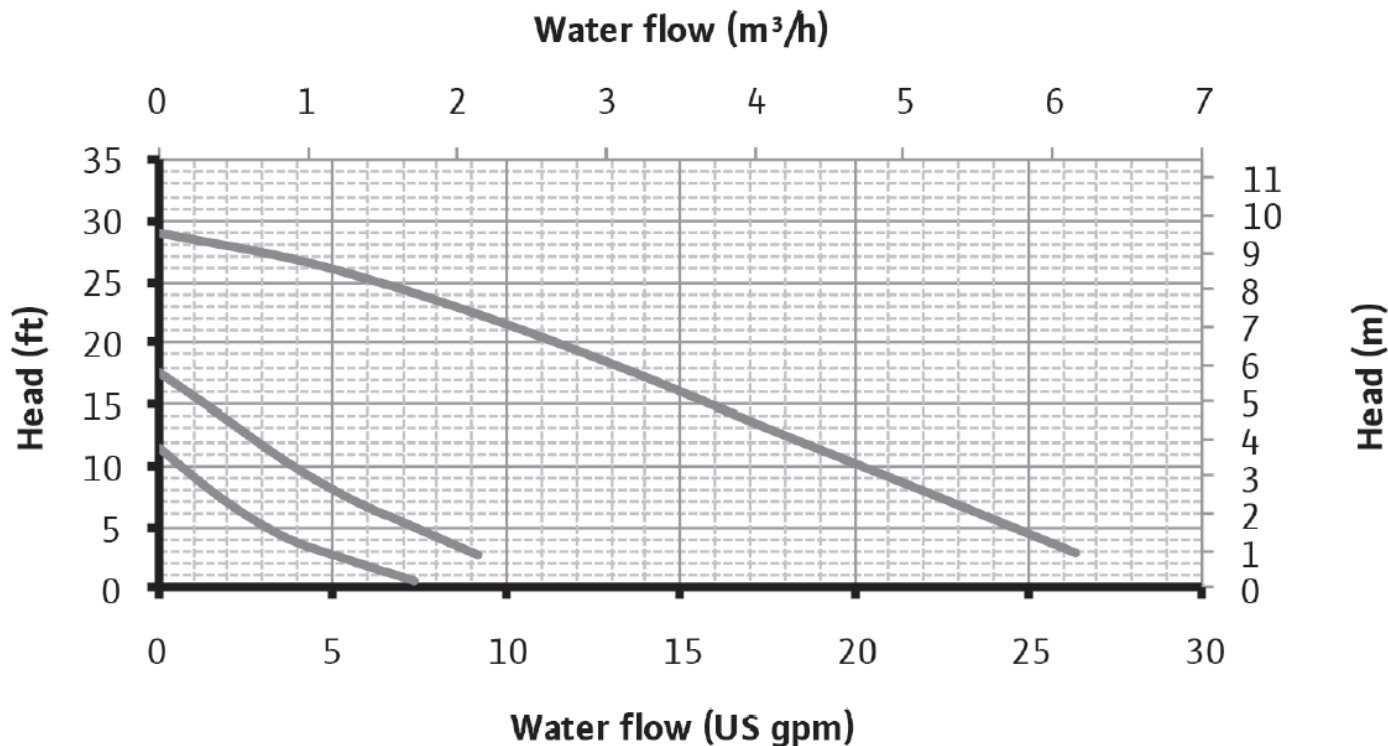
- ✓ U.S.Green Building Council Membership
- ✓ ISES Certification
- ✓ ASES Certification
- ✓ Colorado Solar Energy Association

List of components	
1) Pressure relief valve	
2) Pressure gauge (145 psi / 10 bar)	
3) Ball valve with temperature gauge in the return (320°F / 160°C)	
4) Solar pump - UNIMAXX-PLUS-SC-S30-R	
5) Flowmeter	
6) Drain Valves (Filling/Flushing Port)	
7) Ball valve with temperature gauge in the supply (320°F / 160°C)	
List of connections	
a) Brass Compression Fittings - UNIMAXX-PLUS-SC-500-ADPT-3/4IN-CF (or 1IN-CF)	
b) Expansion Tank Fittings 3/4IN G-NPT - XMaxx-HW-BUSHING-3/4IN-3/4IN-G-NPT	
c) Quick Connect fittings – FlowMaxx-A-3/4IN-3/4IN-PF-M	



Pump station can be also offered without the pressure gauge.

Below, the pressure drop characteristic of UNIMAXX-PLUS-SC-S30-R solar pump, which is the heart of the solar hot water pumping system, is presented:



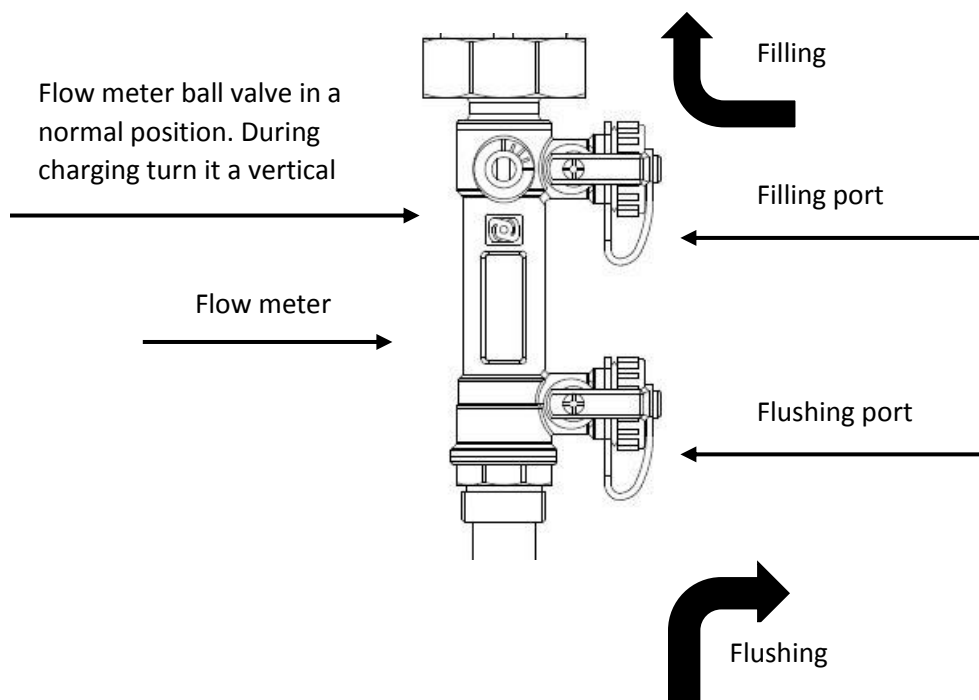
From this chart you can easily read some important information of pump which is used in pump station.

Montage of Solar Pump Station

Remember the Solar Pump Station must be installed in a perpendicular position (standing directly on a ground/floor).

Charging Steps of Solar Pump Station

1. Before you start make that air vents on roof are closed, if will prevent from glycol leaks out.
2. Prepare all equipment which is needed like transfer pump, hoses and glycol (mixture of 50% glycol, 50 % water) used to charge the solar loop.
3. Connect discharge pump to top connection on the solar pump station.
4. Connect return hose to glycol drum using bottom connection on the solar pump station.
5. Prime your transfer pump, it will prevent the pump form damage and make sure you have a pressure.
6. Open the filling ports (fill/flush port) and their valves (normally closed). Flow meter ball valve in perpendicular position to the valve body. This position allows glycol to circulate in the solar loop.
7. Remember to turn the solar pump on a manual mode. Check if the temperature gauges are open (red and blue one). It allows to glycol to circulate thorough the solar pump station.
8. Turn on a transfer pump, build pressure until glycol returns from the return hose into glycol drum. Regulation ball valve on rotameter is still closed. Observe the glycol level inside the glycol drum. If it is essential, refill it.
9. The whole process should take from 15-30 minutes, till in the return hose there will be no air bubbles. The charging process will be ended when the flowing glycol will be clear (no air inside the system).
10. Begin to close the return valve on the filling ports, this activity lead to building the pressure. Build the pressure to 50+ PSI till you have some flow which is coming out into the glycol drum. High pressure pushes the air out of the system. Repeat the building the pressure process a few times to make sure that there is no air inside the system.
11. Bleed the air out of the air bleeding points (air vents in collectors, air vent on pump station, air vent on pump).
12. Let the system circulate at this pressure for 20-30 minutes After that close the filling ports and turn off the transfer pump.
13. Turn the flow meter valve to the vertical position (opened).Leave the pump in the manual mode.
14. You have made every step of charging steps of solar pump station.



Filling ports and their valves are closed

Ball valve in vertical position (allowing glycol to circulate in the solar loop)



Open filling ports by twisting end caps



Open filling ports valves



See that there is possibility to fill the system



Turn ball valve to horizontal position (preventing glycol from circulating)



Connect compressor hoses to filling ports and charge system up to 35 PSI



The proper way of use the temperature gauges



Normal work - ball valve is open



Repair work – ball valve is closed

Check if the temperate gauges are open before starting the Solar Pump System

Flow regulation of a working fluid in a Solar Pump Station (on a flow meter)

1. Turn the solar pump on first gear on a manual mode without the flow regulation (maximal rotational speed of solar pump).
2. Flow meter ball valve should be fully open.
3. Using the screwdriver manipulate the regulation bolt on a flow meter as long as you achieve the right value of working fluid flow rate.
4. If you cannot achieve required value of fluid flow rate, you should change the pump gear on a higher.

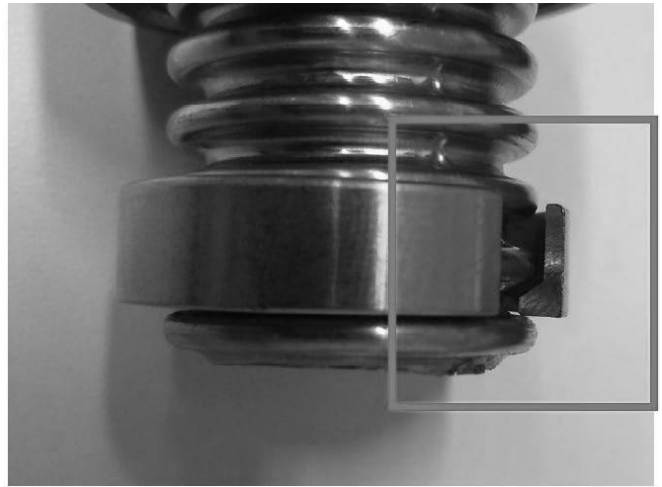
Connection to Solar Pump Station

There are two types of connection which are:

- Quick Connect Fittings
 - Compatible only with SunMaxx FlowMaxx stainless steel piping system.
 - Reusable connections
 - Easy and effective installation process – basic tools needed
- Copper Press Connection
 - Typical connection with existing installations
 - No extra connectors - connected directly to the pump station
 - Rust resistant
 - Press connection

Remember to check every connection it will prevent form leaks in the system

Connecting Lineset – Quick Connect Fittings

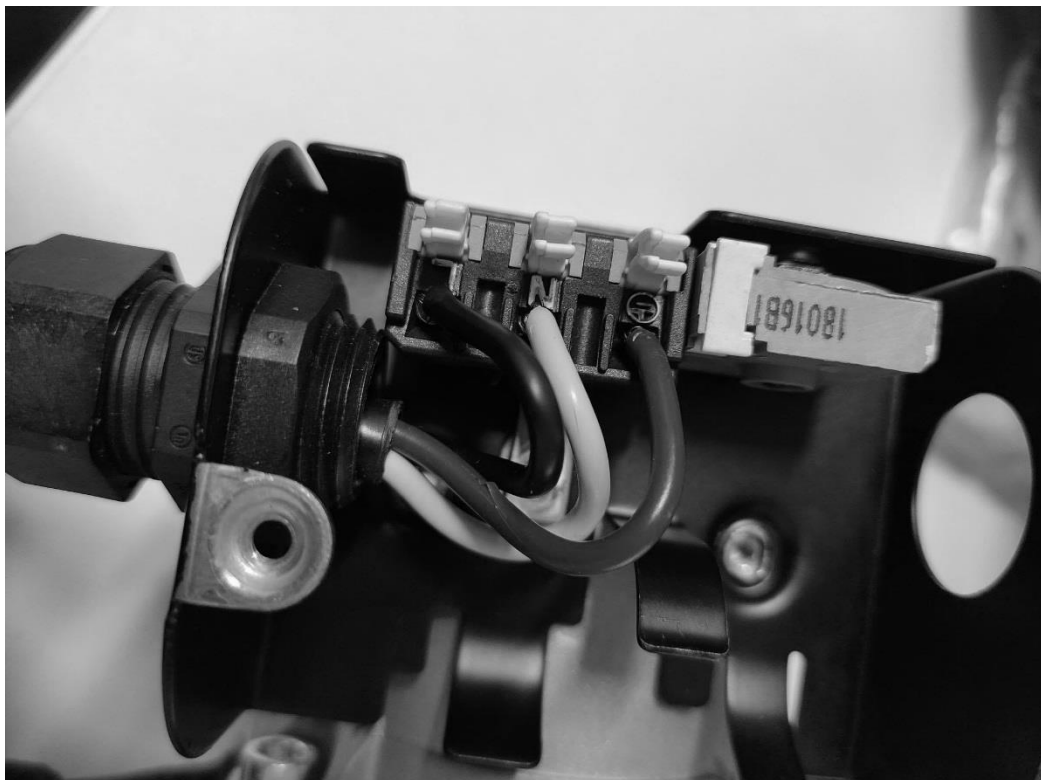


[How to connect Stainless Steel Pipe using Quick Connect Fittings - LINK](#)

Solar Pump Wiring

Solar pump should be supplied with 115-120V power supply. Pump max amperage is 1,5A.

Pump electrical terminal. Wires should be connected to solar controller terminals in order to control its working time.



Additional elements used in a Solar Pump Station

3/4"



UniMaxx™ Series

3/4 IN Pump Station to 3/4 IN Compression Connection sell in a 4 pcs package. These pieces are used to connect pump station with piping system. Every inlet and outlet in pump station need one of these connectors. Using them allow to make installation faster and more efficient. Every piece in made of brass which is durable and usually used in water installation.

These is also another size – 1 IN Pump Station to 1IN Compression Connection. The size depends on a piping system in a whole installation.

3/4"



XMaxx™ Series

These fitting are used to connect the pump station with an expansion tank. There is a different thread in these connections. So, we are using this product which changes NPT to G Thread.