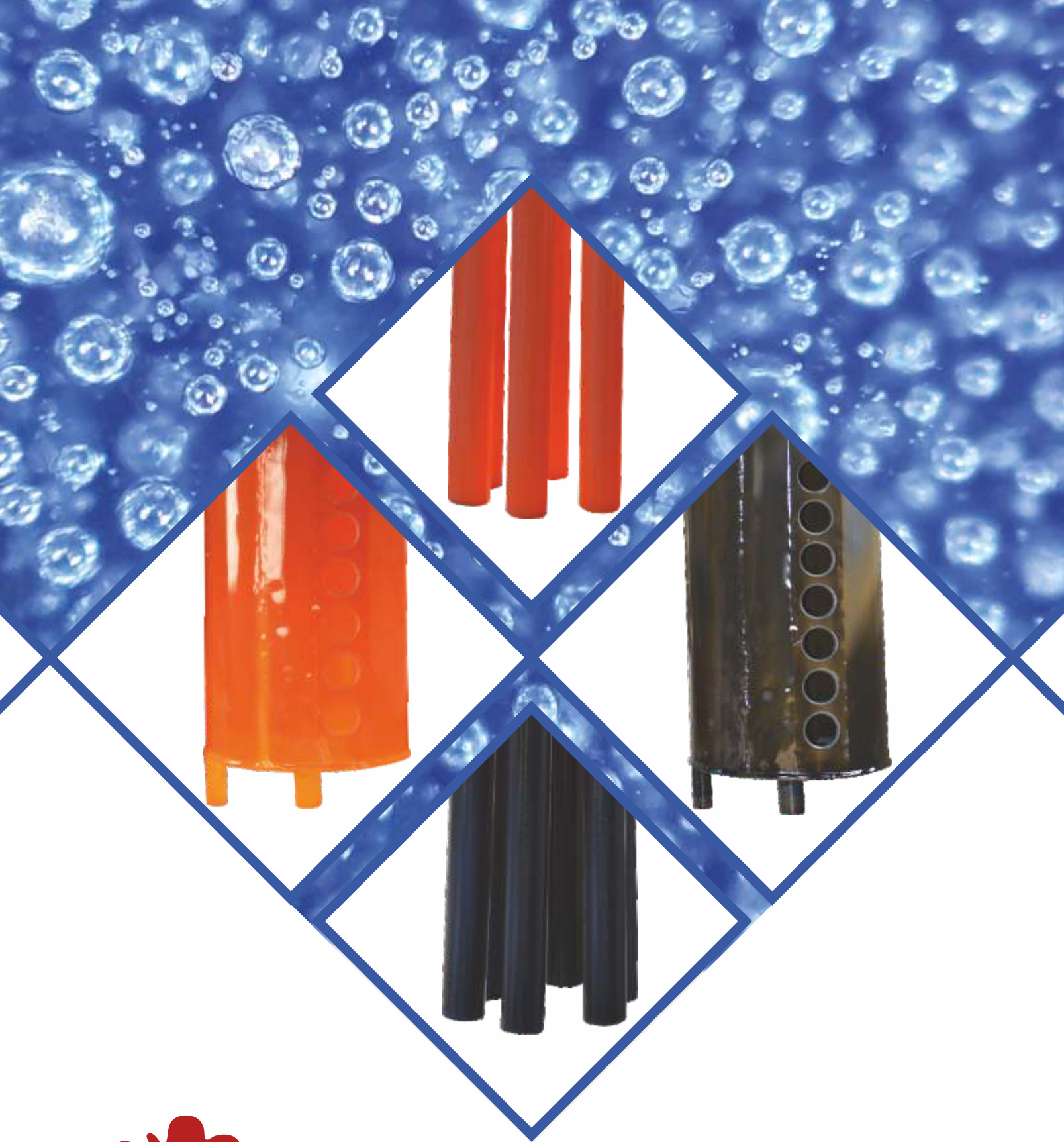




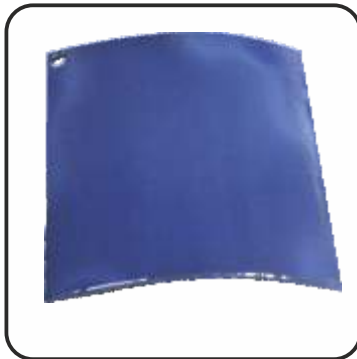
Glass-lined steel



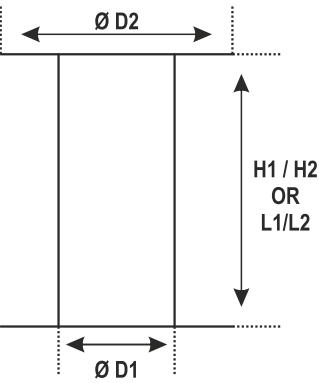
Sunline
INDUSTRIES

An ISO 9001-2015 certified





Pipe & Flange

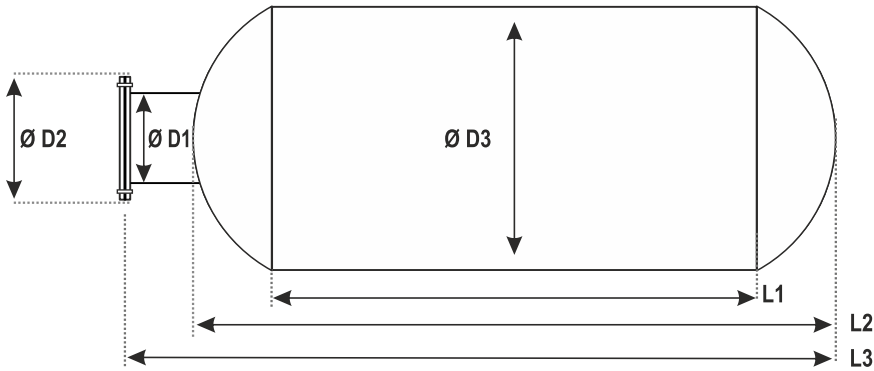


PIPE & FLANGE SPECIFICATION

Sr. No.	Pipe Size MM/Inch (DN)/(NPS)	Pipe O.D. D1 in MM	Height / Length		Flange O.D. D2 in MM
			L1/H1 in MM	L2/H2 in MM	
1	½"/15	21.30	1000	2000	88.9
2	1"/25	33.40	1000	2000	108
3	1½"/40	48.30	1000	2000	127
4	2"/50	60.30	1000	2000	152.4
5	3"/80	88.9	1000	2000	190.5
6	3½"/90	101.6	1000	2000	215.9
7	4"/100	114.3	1000	2000	228.6
8	5"/125	141.3	1000	2000	254
9	6"/150	168.3	1000	2000	279.4
10	8"/200	219.1	1000	2000	342.9
11	10"/250	273.0	1000	2000	406.4
12	12"/300	323.80	1000	2000	482.6
13	14"/350	355.60	1000	2000	533.4
14	16"/400	406.40	1000	2000	596.9
15	18"/450	457.20	1000	2000	635
16	20"/500	508.00	1000	2000	698.5
17	24"/600	610	1000	2000	812.8

* Pipe: ASTM A106/53 Grade A/B Flange: ASME B. 16.5 Nominal

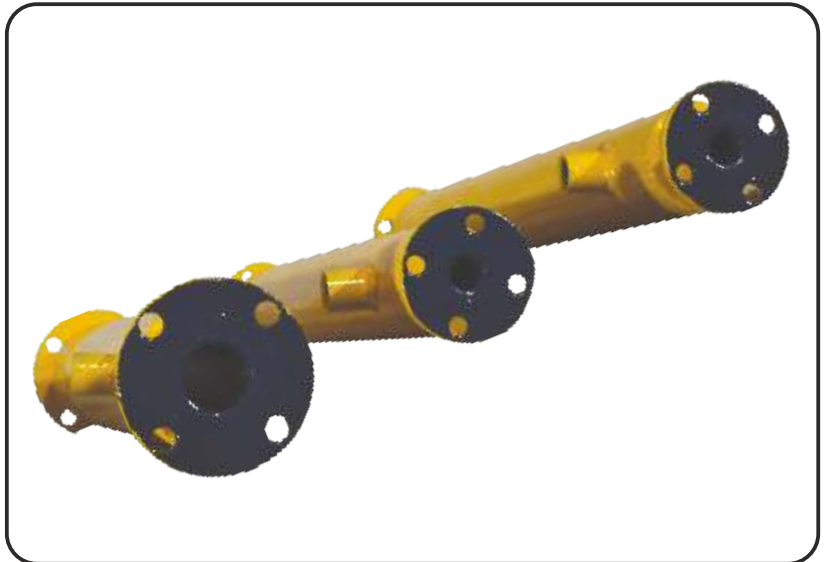
Storage Tank



TANK SPECIFICATION

Sr. No.	Capacity (Ltrs.)	D1	D2	D3	L1	L2	L3
1	100	380	465	457	450	710	790
2	200	380	465	457	1045	1305	1385
3	300	380	465	508	1305	1585	1665
4	500	380	465	610	1500	1830	1910
5	750	380	465	805	1260	1590	1670
6	1000	380	465	805	1750	2080	2160
7	1250	450	535	955	1520	1870	1950
8	1500	450	535	955	1870	2220	2300
9	1750	450	535	955	2210	2560	2640
10	2000	450	535	1050	2080	2430	2510

* All the dimension are in MM



Glass-lined Equipments

Sunline Industries is a leading manufacturer and exporter of Sunline-make glass-lined water heaters. The Company has wide experience in manufacturing glass-lined hot water pressure tanks. The Company has now expanded its manufacturing base and is now providing a range of glass-lined equipments that includes: glass-lined steel pipes, fittings, storage tanks and process equipments mainly used in chemical, pharma and food industries.

The manufacturing of glass-lined steel equipment is a three-step process, consisting of glass production, steel fabrication, and combining of the glass and steel. The process is carried out by fusing powder glass to the inner surface of the steel equipment. The equipment is fired at a temperature ranging from 850 – 870°C. The high temperature stimulates molecular interaction that melts the powder, which eventually cools down and hardens to form a smooth durable glass coating on the inner surface of the metal.

———— Glass-lined Steel Equipments : Advantages ————

The powder glass used in the fusion with the composite metal (steel) material used in the construction provides the best of benefits. These equipments are used in pharmaceutical, chemical, petrochemical, pesticide, metallurgical and more in food and drug industries. The external steel construction provides strength while the internal glass lining gives universal corrosion protection and a smooth non-contaminating surface.

The unique characteristic of glass-lining provides several advantages. Here are a few key benefits of glass-lined steel equipments.

- 1. CORROSION RESISTANCE :** Glass-lined steel provides greater corrosion resistance to acids, alkalis, water and other chemical solutions except for hydrofluoric acid and hot concentrated phosphoric acid. Therefore, glass lining equipments have longer life. This makes the use of glass lining of utmost importance in many of the industrial / manufacturing processes.
- 2. FLEXIBILITY :** The chemical, mechanical, and thermal properties of glass can handle a wide range of operating conditions. Industries that use glass-lined equipments can make drastic changes to their process with no added investment for new or additional equipment. This adaptability makes glass-lined steel widely used in R & D projects and for industries that operate batch processes and other multifaceted applications.

3. PURITY : Glass-lined steel is static providing resistance to all kinds of stains, faults or defects. Therefore, these equipments do not negatively react to any type flavour or colour. As a result, these equipments are widely used in food and drug industries where purity is essentially important in the product manufacturing process.

4. EASE IN CLEANING : The smooth surface of the glass-lined steel is easy to clean. It also does not require frequent cleaning as the glass-lined surface minimizes heat transfer caused by building up of any viscous or sticky products. Therefore globally, glass-lined steel equipments have been adapted to cGMP requirements for cleaning, cleanliness, and sterilization.

5. ECONOMY : The combination of glass and steel provides the best of both the material characteristics; fusing glass to steel produces a composite material with an inside that offers product protection and an outside that provides structural strength and durability. And above all they provide cost effective solutions to steel and alloy vessels.

It is also examined that any treatment on SS equipments or any manufacturing process used, SS is reactive to many harsh chemicals. Therefore, it is advisable to use alternate chemical resistance solutions. Other material viz. Teflon or PTFE material have excellent chemical resistance properties, however, their durability like all plastic material is at stake, as they are prone to surface scratching, mechanical deterioration and abrasion attacks. In addition, they expand even at temperatures up to 100 °C and their inability to withstand pressure. These would lead to significant changes in the dimensional properties of the vessels, pipes or the equipments; furthering the problems with valves, seals and other close fitted components.



Regd. Office: 21-B, Jalaramnagar, Sainath Marg, Behind Mother's School, Gotri, Vadodara-390 021.

Factory: A-4/2, Gorwa Industrial Estate, B.I.D.C., Gorwa, Vadodara-390 016. **Phone:** +91-265-2337674, 2351703,

E-mail: sunlineind@hotmail.com, sunlineglassline@gmail.com **www.solarwaterheatingindia.com**

NOTE: Due to continuous development in the product the company reserves the right to change the Design, Dimension and Pattern without prior notice as and when required.