

Stainless Steel Pool & Spa Heat Exchangers

Instruction

Thank you for purchasing our Stainless Steel Pool & Spa Heat Exchanger(SS Series), our heat exchanger is fully constructed with stainless steel 316L shell and stainless steel 316L corrugated inner tubes this ensures high velocities inside the unit making Stainless Steel Pool & Spa Heat Exchanger a very reliable, efficient and cost effective way to transfer heat indirectly between any boiler circuit and any pool or spa circuit, besides other application.

We have a large range of heat exchangers well suited from small spa up to Olympic size pools, our units are rated from 16kW(55,000 Btu/H) to up to 1,056kW(3,600,000 Btu/H).

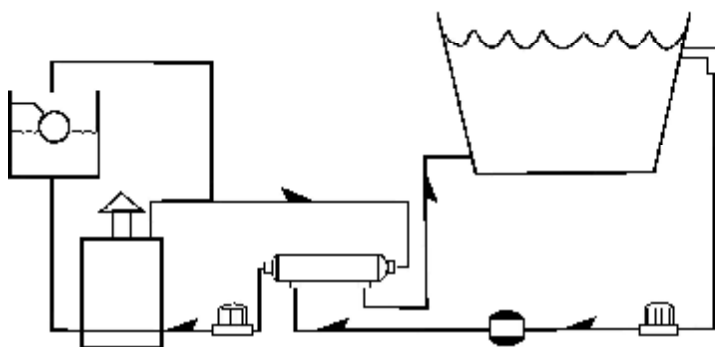


Please contact your nearest sales representative to assist you with the sizing of each application.

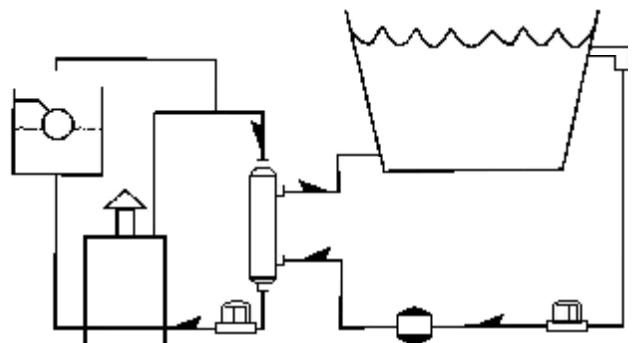
Mounting

The method of mounting used is total responsibility of the installer. The units are designed for both horizontal and vertical mounting, it is recommended to always install the unit with a mounting bracket fixed to a wall, and/or ceiling or floor to prevent hammer heads or vibrations which could damage the unit, the use of expansion joints on the boiler circuit is recommended.

Horizontal Mounting



Vertical Mounting



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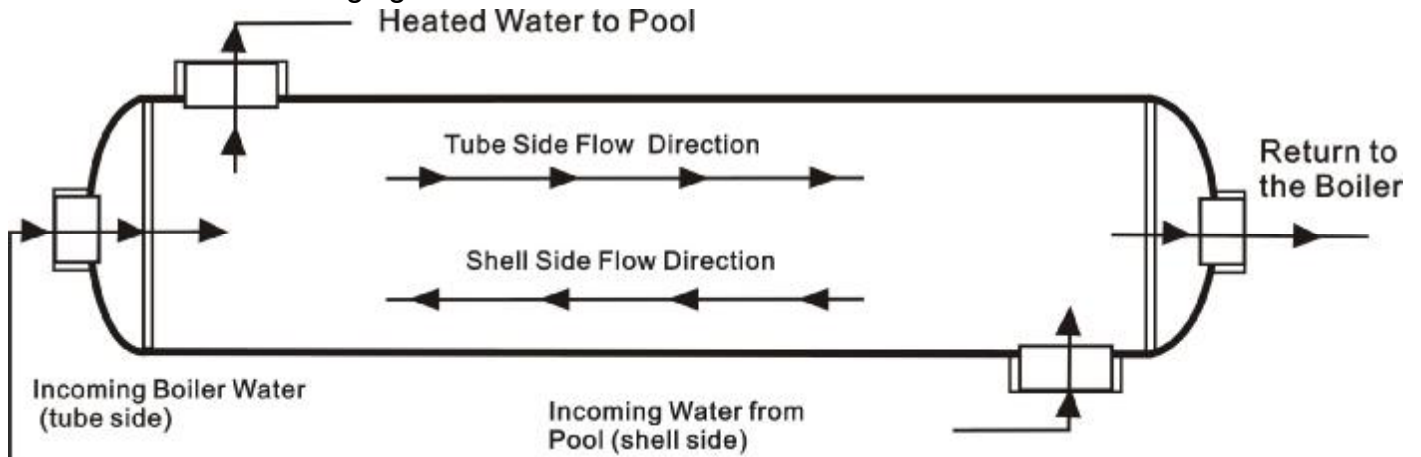
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Installation Instructions

Important: Always install the Stainless Steel Pool & Spa Heat Exchanger in a counter flow pattern, as shown in the following figure.



Stainless Steel Pool & Spa Heat Exchangers should be installed downstream of the filtration and pumping equipment. The boiler water must be assisted and the usual precautions taken to prevent air locks. The pool water pump should be controlled by a thermostat in the pool pipe work before the heat exchanger and set at the required temperature.

Operation Instructions

It is really important that these instructions are followed to prevent any corrosion or erosion of Stainless Steel Pool & Spa Heat Exchanger.

A) Operation the unit under the following design parameters;

Shell/tube side pressure: 1.3MPa(190PSI),

Shell/tube side temperature: $-8^{\circ}\text{C}(-19^{\circ}\text{F})$ --- $208^{\circ}\text{C}(406^{\circ}\text{F})$

B) Install unit before chlorination device.

C) Start-Up:

- Valves should be opened gradually to achieve a steady increase in flow and pressure into the unit;
- The cold(heated) fluid should first enter into the system;
- The hot(heating) fluid, water or steam, should be gradually brought into the system;
- Check all connections for leaks.

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- D) Shut-Down: Shut down hot fluid side first, then the cold fluid side.
- E) Always keep PH within correct levels. The ideal pool pH should be kept between 7.4 to 7.6, it is really extremely important to avoid pH to fall below 7.2 or above 7.8, you must check on a daily basis. Modify your pool condition if necessary.
- F) You must ensure that the chlorine levels are in the range recommended by your pool chemicals supplier and they are aligned to your specific needed.
- G) If you have installed a by-pass fitted to the heat exchanger circuit, it is important that any valve is correctly positioned to allow the recommended pool water flow to pass through the heat exchanger unit.
- H) The filter should be checked regularly, specially sand filters, this type of filtration if working improperly will allow sand to pass around the pool circuit causing erosion of the heat exchanger and other components of the system as well.
- I) It is of main importance that the correct chlorine dosage is added to the pool. To allow proper dispersion of this chemical into the pool, distribute evenly in the different area of it, do not does in one area only as this will create highly acidic areas which can cause irreversible damage to the heat exchanger.
- J) Keep pool free from leaves and other debris, all organic matter can decay an increase the pool pH causing damage to the unit.
- K) It is important to winterize properly if the pool is exposed to winter conditions, we recommended fully draining down the heat exchanger or removing it completely from the installation through the duration of the shutdown period, otherwise icing of the unit would damage the heat exchanger for good.
- L) Always choose harmless cleaning liquids if needed and clean carefully.
- M) Stainless Steel Pool & Spa Heat Exchangers are not suited for saline or sea water environments.
- N) Chlorinator should be in optimal working conditions.

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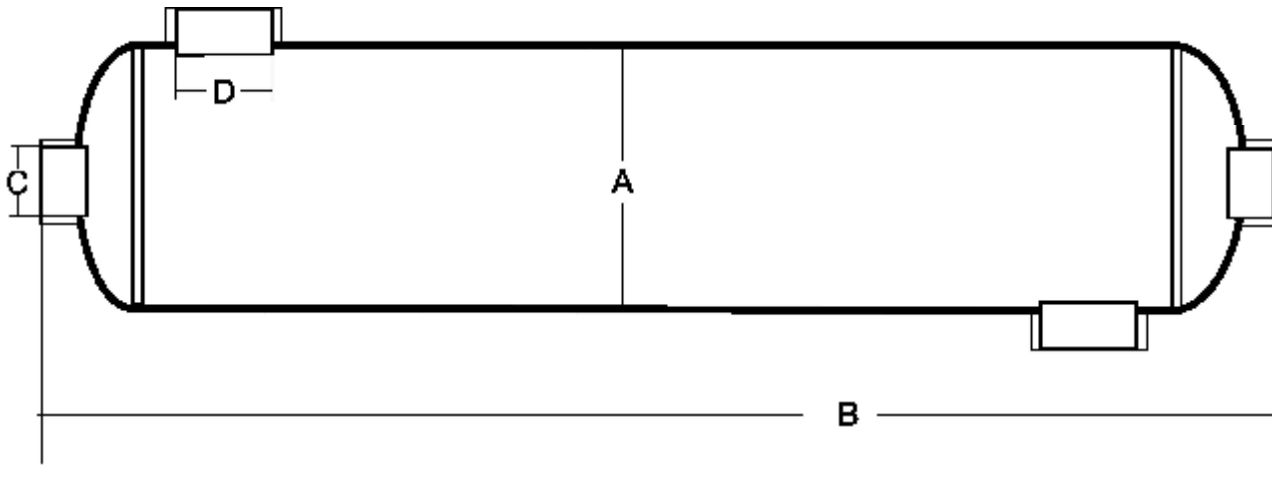
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Specifications of SS Series

Model	A (mm)	B (mm)	C	D
SP-55SS	60	360	3/4"	1"
SP-85SS	60	520	1"	1 1/2"
SP-155SS	76	450	1"	1 1/2"
SP-210SS	76	570	1 1/2"	1 1/2"
SP-300SS	76	684	1 1/2"	2"
SP-360SS	89	830	1 1/2"	2"
SP-600SS	114	900	2"	2 1/2"
SP-1200SS	133	900	2"	2 1/2"
SP-3600SS	1220	200	3"	4"

Note: Units with the same side shell connections are available.



Quick Selection of SS Series

Model	Normal Capacity		Pool Capacity		Heat transfer area m ²
	kW	Kbtu/hr	Gallons@1°F/hr	Liters@1°C/hr	
SP-55SS	16	55	4700	32021	0.15
SP-85SS	25	85	7300	49735	0.25
SP-155SS	45	155	13300	90613	0.33
SP-210SS	61	210	18000	122634	0.44
SP-300SS	88	300	25800	175776	0.64
SP-360SS	105	360	31500	214610	0.85
SP-600SS	175	600	52500	357684	1.55
SP-1200SS	352	1200	105600	719455	2.01
SP-3600SS	1056	3600	316800	2158365	6.17

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Note:

1. For occasional (holidays & weekends) use pools we recommend a 2x output multiplier to obtain a 2°F/hr(2°C/hr) heat up rate;
2. Nominal values are based on 60°C temperature between incoming heating and heated water.

WARNING

The following fluids are prohibited for use as a flushing agent for SJ series;

- Hydrochloric acid up to 0.1% concentration
- Solutions that contain MCl
- Chlorides (MgCl₂, NaCl between 0.01-1%, CuCl up to 1%, CaCl₂ from 5% to saturation)
- Any fluid that will deposit alkaline residue or phosphorous

IMPORTANT!!!

IT IS PURCHASER'S RESPONSIBILITY TO ENSURE THAT ALL FLUIDS IN CONTACT WITH THE PRODUCTS ARE COMPATIBLE WITH THE CONSTRUCTION MATERIAL OF THE PRODUCT. THIS INCLUDES OPERATIONAL FLUIDS AND CLEANING FLUIDS. CORROSIVE ENVIRONMENTS ARE OFTEN A COMBINATION OF CHEMICAL LEVELS, FLOW RATES, AND TEMPERATURES. FAILURE TO ENSURE THIS WILL RESULT IN DAMAGES TO THE PRODUCT.

IF ANY OF THE PREVIOUS CONDITIONS IS NOT FULLY COMPLIED THE WARRANTY OF THIS UNIT IS VOID.

Technical or commercial considerations may, from time to time to alter the design, performance and dimensions of the equipment and the right is reserved to making such changes without previous notice.

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Contact your nearest representative.

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