

# High Purity Stainless Steel Heaters



**HEATEFLEX**

# Stainless Steel Heaters - Precision Quality Heaters for Demanding High Purity Applications

*Heateflex Corporation's series of Stainless Steel Heaters are designed for use in high purity fluid heating applications such as electronics, biomedical, biopharm, pharmaceutical, parts cleaning, and any fluid heating application where the ruggedness and durability of stainless steel are required. Constructed using only high quality 316L grade Stainless Steel material, these Heaters are custom built for use with deionized water, solvents, and other chemistries compatible with Stainless Steel material.*

## Benefits:

- High Purity Heating for N2 or Fluids
- Compact Designs for Space Savings
- Easy Installation

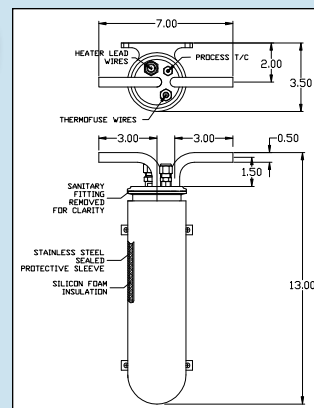
Heateflex has provided ultra-pure heating solutions to the semiconductor industry since 1974. It's this experience and our deep understanding of High Purity Heating that drove our engineers to design the patented Stainless Steel Heater Modules. You no longer have to worry about whether the industrial heaters you specified will meet the purity challenge and requirements of your process. When you need a stainless steel heater, Heateflex offers a Stainless Steel Heater Module with unique high purity characteristics, built and tested in a clean manufacturing environment.

## Simple Innovation

For high purity heating, you need a heater made with the right materials and the right design. Typical stainless steel heaters include a screw plug heater threaded into a housing (we've even seen others put plumber's putty on the threads). Others use bulky flanges and bolts. Our heaters use a simple sanitary fitting clamp to attach the housing to the heater. Sometimes simple is better and this simple innovation eliminates particle entrapment by eliminating threads. In addition, Heateflex Stainless Steel Heating modules are manufactured with all 316L polished/passivated stainless steel wetted surfaces.

## N2 Heating

Use these modules for heating Nitrogen or other inert gases. Its compact design allows for easy installation. Heateflex offers a variety of wattages to meet your requirements.



## Gas In-Line Heater Module

Model No.	Watts	Volts
SGH1-375	375	120
SGH1-500	500	120
SGH1-750	750	120
SGH1-1500	1500	240
SGH1-2000	2000	240
SGH1-3000	3000	240

## Gas Heater Safety Interlocks

- **Over-Temperature Protection** to maintain safe heater temperatures
- **Process Hi-Limit** to maintain safe gas temperature
- **Thermal Fuse** for added temperature protection

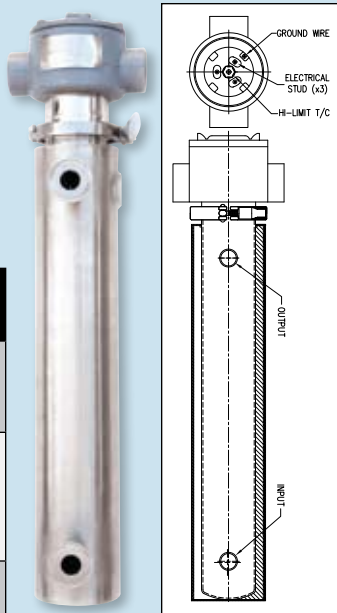
## Fluid Heating

Use these modules to heat DI water or other process fluids compatible with 316L stainless steel.

### DI Water Heater Module

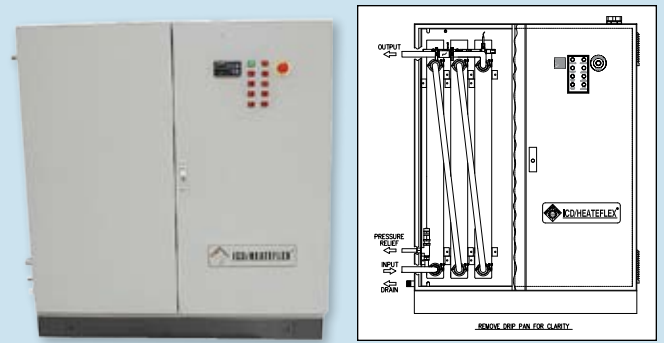
Model No.	kW	Volts (3 Phase, Delta)	Height (in)
SSH-1-12	12	200	26.75
		208	
		400	
		480	
SSH-1-18	18	200	36.75
		208	
		400	
		415	
		480	
SSH-1-24	24	240	43.75
		480	

Other kW and voltages available on request



## Poseidon™ DI Water Heater

The Poseidon™ puts everything you need into one cabinet. It is designed for processes that need the heater and controller centrally located. This system is easy to install. All you need to do is plumb the water and connect the power. All other connections and interfacing are internal and complete.



### Poseidon™ DI Water Heating Systems

Model No.	kW	Volts	Dimensions (H x W x D)
SSDI24-3	24	240/480	51" x 39" x 12"
SSDI48-3	48	240/480	51" x 39" x 12"
SSDI72-3	72	240/480	51" x 39" x 12"
SSDI96-3	96	480	51" x 39" x 12"
SSDI120-3	120	480	51" x 48" x 12"
SSDI144-3	144	480	51" x 48" x 12"

Other kW and voltages available on request

## In-Line Heater Safety Interlocks

- **Over-Temperature Protection** to maintain safe heater temperatures
- **Process Hi-Limit** to maintain safe DI water temperature
- **Thermal Fuse** for added temperature protection
- **Electrical Grounded System**

## Poseidon™ High-Purity DI Water Heater Features:

- Sanitary Fittings throughout eliminates threads to reduce particle entrapment and the potential for bacterial growth
- All 316L Stainless Steel wetted surfaces are polished and passivated
- 100% tested integrated Control and Safety Package with PID Temperature Control
- Heating Elements are UL & CSA Listed (UL 499)

The Poseidon™ packages the advantage of the patented Heateflex stainless steel modules with the accurate temperature control and reliable system safety. This results in a factory-tested unit with easy installation and the assurance that your process will remain High-Purity. The systems are designed to meet SEMI S2-0200 Safety Product Guidelines and are available in a self-contained or modular enclosures.

## Poseidon™ Safety Interlocks

All Poseidon™ heaters are designed to be CE and SEMI S2-0200 compliant. The internal heating elements are UL Listed. The following safeties are standard in all Poseidon™ models:

- **Over-Temperature Protection** to maintain safe heater temperatures
- **Process Hi-Limit** to maintain safe DI water temperatures
- **Electrically Grounded System**
- **Emergency Power Off** to Heater Power (EMO)
- Low Voltage (24 VAC) Operator Safe Controls
- Low Flow Shut Off



# SX Series DI Water Heating Systems

Heateflex offers the SX Series DI Water Heaters for customers with limited space. The SX series offers the smallest footprint per wattage of all our water heaters, yet still provides the safety, reliability and performance you have come to expect from Heateflex.

## Features:

- All 316 Stainless Steel Wetted Surfaces
- Heating Vessel that is Insulated/Jacketed and Includes Pressure Relief
- 100% Tested Integrated Control & Safety Package with PID Temperature Control
- Heating Elements are UL & CSA Listed and NEMA 1 Rated



## Small Foot Print and Big Performance

The SX series heaters are designed in a vertical configuration to allow the smallest footprint in your facility space. The temperature control and safety package come standard and are enclosed in a NEMA enclosure mounted to the front of the heater vessel. Installation is easy because the heater is pre-wired and tested with the integrated control and safety package.

## SX Safety Interlocks

Like the other Stainless Steel heaters, Heateflex is committed to providing reliable products with safety being forefront in design. The following safeties are standard in all SX models:

### Liquid Level Monitor

Senses for liquid presence, and only allows power to the heaters when liquid is present.

### Over-Temperature & Process Thermocouple

The over-temperature thermocouple provides safety by monitoring the temperature of the heating element and verifies that the unit operates at safe temperatures. The process thermocouple verifies the DI water temperature is at the process set point.

### Door Interlock / Tip Over Switch

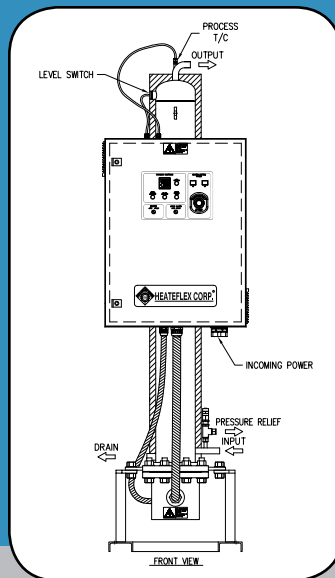
The door interlock shuts off the high voltage if the electrical enclosure is opened. While the tip over switch shuts down power if the sensor detects that the unit is not mounted correctly or has tipped over.

### Pressure Relief

Protects the heater vessel and maintains safe internal pressure levels.



\*shown with available options



## SX DI Water Heating Systems

### Operating Voltage (3 Phase)

Model	kW	Dimensions W x D x H (in)	In/Out (in) (FNPT)	208 (Amps/ph)	240 (Amps/ph)	480 (Amps/ph)
SX 12	12	24 x 24 x 70	1	33.3	28.9	14.5
SX 18	18	24 x 24 x 70	1	50.0	43.4	21.7
SX 24	24	24 x 24 x 70	1	66.7	57.8	28.9
SX 36	36	24 x 24 x 70	1	100.0	86.7	43.4
SX 48	48	24 x 25 x 70	1	133.4	115.6	57.8
SX 60	60	24 x 25 x 70	1.5	—	144.5	72.3
SX 72	72	24 x 25 x 70	1.5	—	173.4	86.7
SX 100	100	24 x 25 x 82.5	1.5	—	—	120.4
SX 120	120	24 x 25 x 82.5	1.5	—	—	144.5
SX 150	150	27 x 27 x 82.5	1.5	—	—	180.6

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