



**HEATEFLEX**<sup>®</sup>  
Ultra-Pure Heating Solutions

**Aquarius**<sup>®</sup>  
Ultra-Pure DI Water  
Heating System



Innovative Design for Heating DI Water with Purity and Temperature Stability  
Meets SEMI S2, S3, & CE Safety Guidelines

# Aquarius® Ultra-Pure DI Water Heating System

The Aquarius DI water heating system from Heateflex continues setting the industry standard as it has for over 20 years. The Aquarius features the field-proven Heateflex® heating coil and all PVDF/PFA wetted surfaces to ensure ultra-pure conditions throughout the heating process.

The Aquarius heating system is engineered to deliver high flows of continuous, at temperature, hot DI water. With models from 40 kW to 225 kW available, Heateflex offers the flexibility to meet your exact flow and temperature process requirements with this system.

## BENEFITS

### Ultra-Pure Design

- PVDF/PFA Wetted Surfaces
- Effective Solution for High Purity DI Water Heating Applications

### User Friendly Touch Screen Interface

- High Resolution LCD Touch Screen with Graphic User Interface (GUI)
- Better Accessibility and Easy Navigation, resulting in a Simple to Use System



### Enhanced Temperature Stability Controller

- Programmable Logic Controller (PLC) with Power-To-Flow® Control Delivers Constant, Stable, and Accurate Temperature Output
- Ethernet Read/Write Connection Allows for Heater Data to be Rapidly Transferred to a Fab SECS/GEM System

### Built to Meet Industry Safety Guidelines

- Meets or Exceeds the Stringent Requirements for UL-499, SEMI S2, SEMI S3, and CE

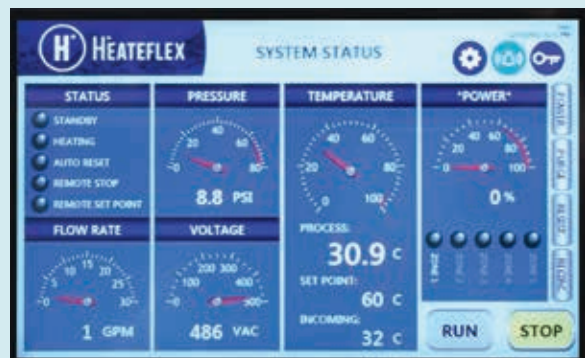
## FEATURES

### Safety Integrated Into the Design

- Short Circuit Current Rating (SCCR) at 100kA
- Advanced Ground Fault Circuit Interrupter (GFCI) System, Sub-30 mamp Rating
- Redundant Safety PLC Monitoring for GFCI, Thermal Cut-Off Sensor, and Hi-Limit Thermocouples with Independent Power Supply
- Redundant Safety Monitoring Relay for Door Interlock Switch and EMO
- NIST-Certified Thermocouples
- Dual Pressure Relief Valves for Both Input and Output Flows Ensure Rapid Pressure Dissipation

### Operator Convenience

- Plug and Play System with Complete Integration of Controls for Ease of Startup
- Seismic Mounting Brackets Relocated Inside the Heater Cabinet for Improved Fab Floor Space
- Lifting Lugs Added to Top of Cabinet, for Ease of Positioning During Installation
- No N<sub>2</sub> Required



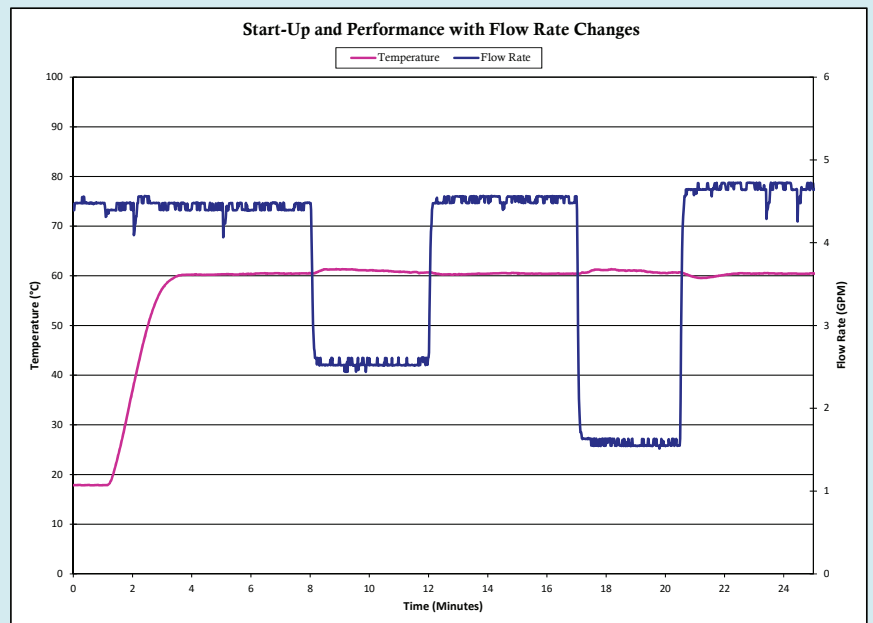
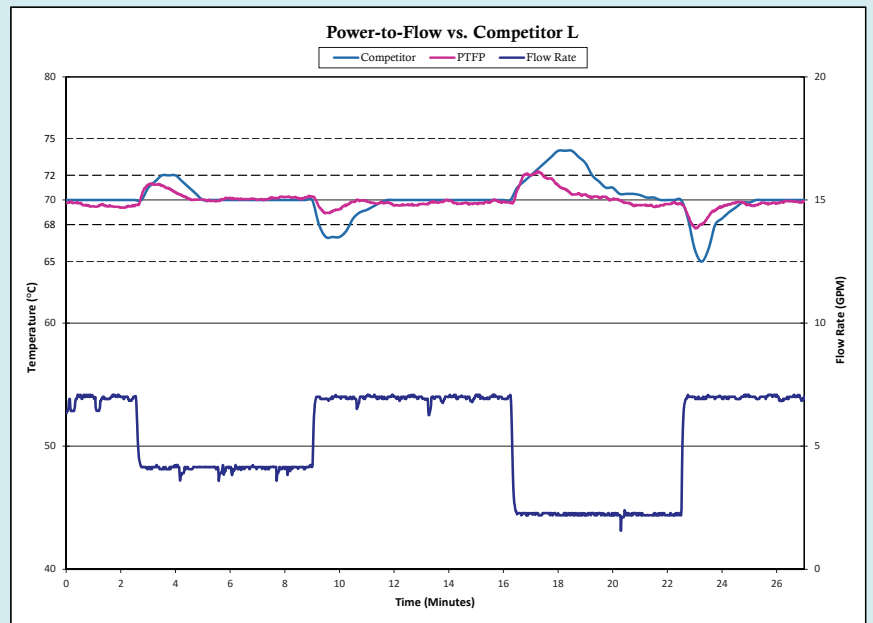
High Resolution LCD Touch Screen with GUI

## POWER-TO-FLOW® CONTROL

Heateflex's patented Power-To-Flow Control is an innovative control system designed to provide accurate temperature output in single pass heating applications. Power-To-Flow Control eliminates undesirable overshoots or drops in temperature. The sophisticated Aquarius® temperature control system features multi-loop capability and feed-forward functions to compensate for variations in the process flow rate. It measures the flow rate of fluid as it comes into the heater, measuring the temperature at various stages in the heating process, and then adjusting the proportion of power applied to each heating zone based on these measurements. This advanced integrated control method reacts quickly to any variations in flow, providing a steady supply of DI water at a stable temperature.

## BENEFITS

- Excellent Temperature Stability
- Rapid Response to Temperature & Flow Variations
- Eliminates Excessive Overshoots & Drops In Temperature



Temperature Controller and Heaters in One Compact System



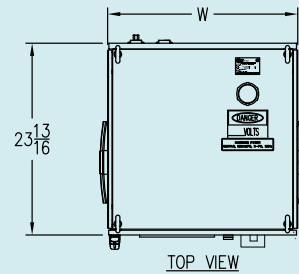
| Aquarius® | kW  | Width (W)<br>Standard Models |          | Width (W)<br>w/ Recirculation Option* |          |
|-----------|-----|------------------------------|----------|---------------------------------------|----------|
|           |     | Low VAC                      | High VAC | Low VAC                               | High VAC |
| DI-40     | 40  | 24"                          | 24"      | 24"                                   | 24"      |
| DI-80     | 80  | 32"                          | 24"      | 32"                                   | 24"      |
| DI-100    | 100 | 39"                          | 32"      | 39"                                   | 32"      |
| DI-120    | 120 | 39"                          | 32"      | 39"                                   | 32"      |
| DI-160    | 160 | N/A                          | 32"      | N/A                                   | 39"      |
| DI-200    | 200 | N/A                          | 39"      | N/A                                   | 39"      |
| DI-225    | 225 | N/A                          | 39"      | N/A                                   | 39"      |

Low VAC: 200-240 VAC, 3-Phase High VAC: 380-480 VAC, 3-Phase

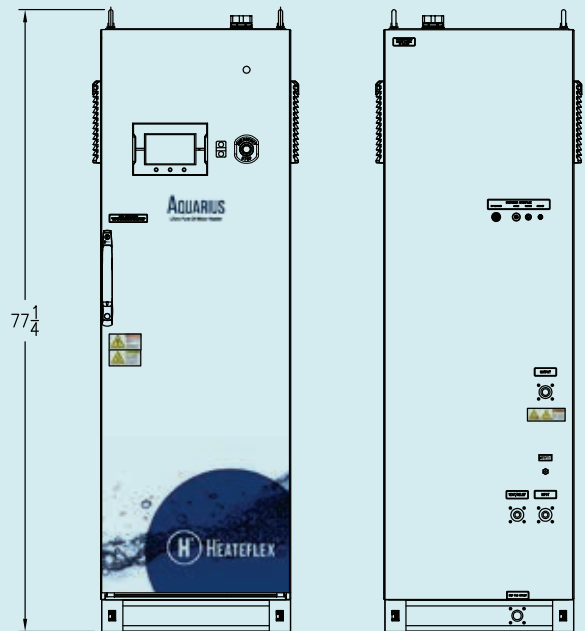
\*Optional model with built-in DI water recirculation feature that provides on-demand hot DI water at temperature.

## AQUARIUS® FACILITY DATA

- Power: 480 VAC, 3-Phase (Other voltages available)
- Water: Input / Output  
40 - 80 kW = ¾" FNPT  
100 - 160 kW = 1" FNPT  
200 - 225 kW = 40mm BCF Union (Other In/Out available)
- Drain: ¾" Compression Tube
- Pressure Relief: 65 psi (In/Out)
- Incoming Power Conduit:  
40 kW = 1"  
80 - 120 kW = 2"  
100 - 225 kW = 3"
- Ethernet Communication (Other Communications Available)

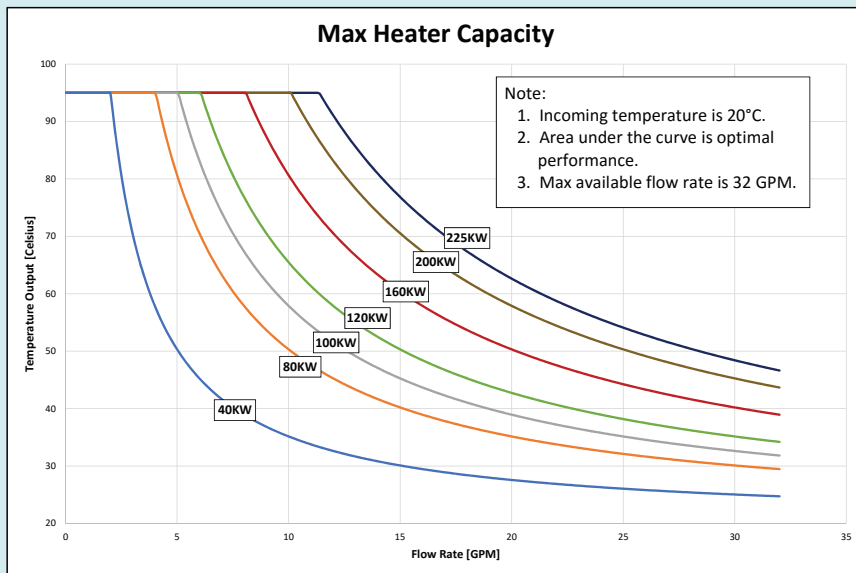


TOP VIEW



FRONT VIEW

BACK VIEW



Call today for prices and lead times,  
or visit us online at [www.heatflex.com](http://www.heatflex.com)

405 E. Santa Clara Street, Arcadia, CA 91006 | T 626.599.8566 | F 626.599.9567

Patent No.: 4756781, 4875957, 2685505 (Japan), 7,258,801, 8,349,122, 1859919 (EU) and other Patent Pending.  
Heateflex, Aquarius, and Power-To-Flow are Registered Trademarks of Heateflex Corporation.  
All data is subject to change without notice.  
Copyright ©2017 Heateflex Corporation

[www.heatflex.com](https://www.heatflex.com)