

QUANTUM

Deionized Water Heater

MTBF >20,000
HOURS

+/- 0.5 °C
ACCURACY

NO STANDBY
FLOW
REQUIRED

HIGH PURITY
FLUID PATH
(GE214 QUARTZ)

CREVICE-FREE
FLUID PATH

MULTIPLE VOLTAGE
AND POWER
OPTIONS



VOLTAGE
208, 380, 415, 480



POWER
30kW to 216kW



MAX TEMPERATURE
95 °C / 203 °F



MAX PRESSURE
4.1 Bar / 60 PSI

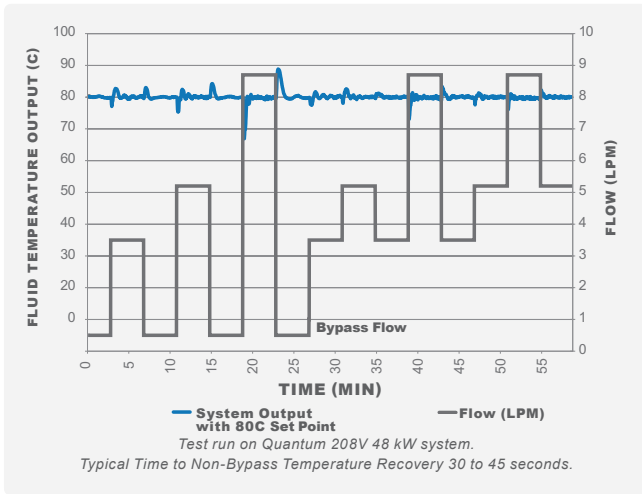


CERTIFICATIONS
CE, Semi S2 & S8

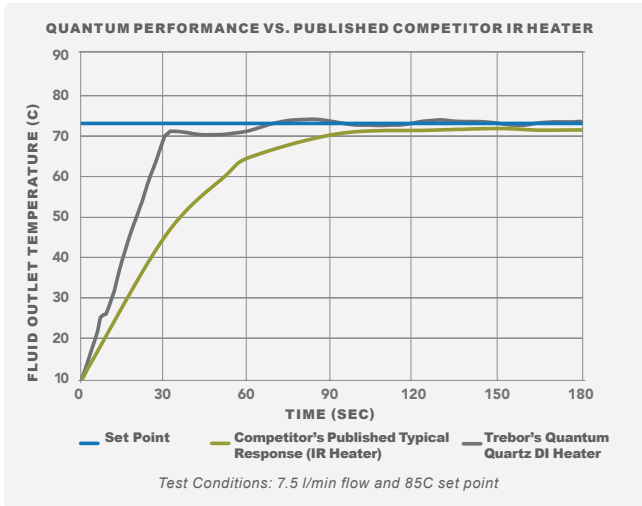
The Quantum Heater Series features Trebor's thin-film on quartz electric resistive technology in an enclosed, custom built unit that offers various power configurations, plumbing options, control options, and user interfaces. Our heating technology provides unmatched response time to changes in flow rates or process set points. The Quantum is intended for use in applications where process control, cleanliness, and system uptime are critical.

This is PURE INNOVATION.

TEMPERATURE RESPONSE CHART

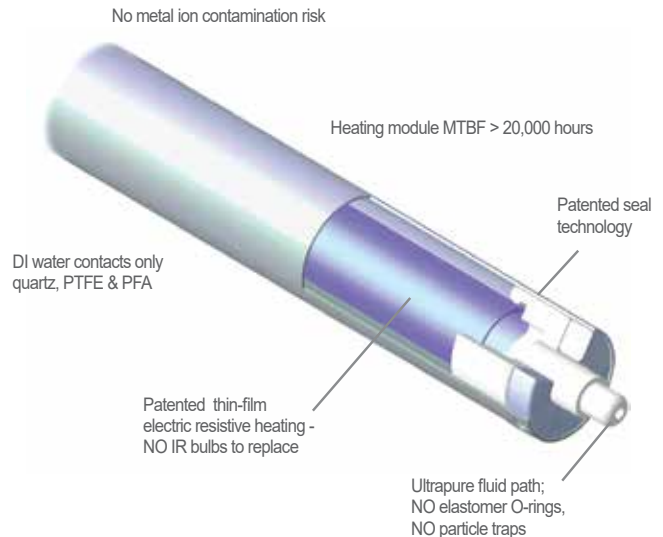


TIME TO TEMPERATURE COMPARISON

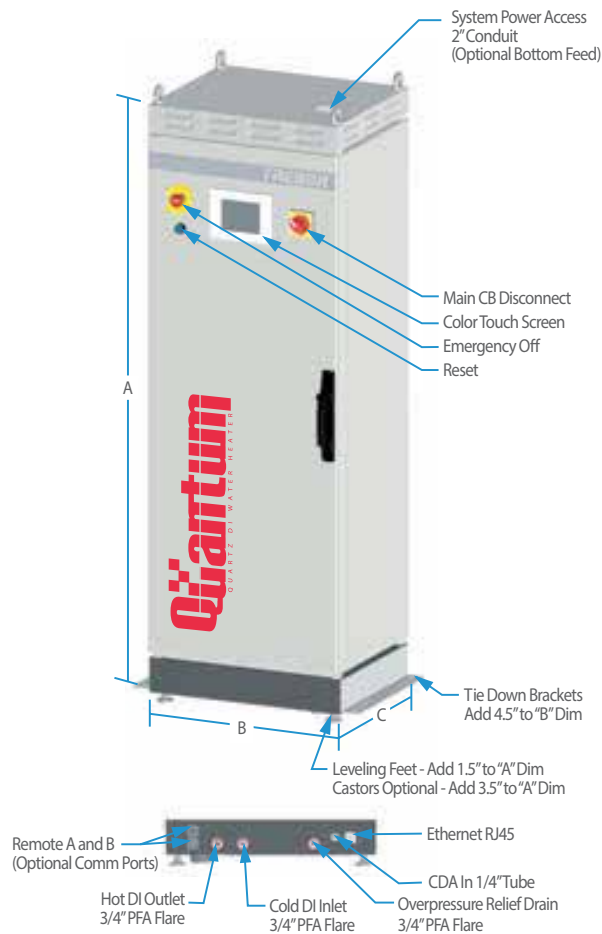


PERFORMANCE

Heater Type	Thin-film on quartz electric resistive heating
Voltages	208, 380, 415, 480 Volt; 50/60 Hz
Temperature Limit	95 °C
Temperature Control	± 0.5 °C in most conditions
Pressure Range	15 to 60 PSI DI water supply
Flow Rate	0 to 57 LPM (0 to 18 GPM); systems may be combined to achieve higher flows (Multiple output systems available)
Efficiency	>98%
Element Life	>20,000 hrs, heating modules are factory re-buildable with hardware exchange
Control System	Zero crossfire SSRs with multi-loop PID control
Communication Options	Ethernet enabled, modbus/TCP (standard), Modbus/RTU, RS-232, RS-485, DeviceNet
Wetted Surfaces	GE quartz, PTFE, & PFA - no elastomer o-rings
Safety Features	Low liquid level detection Redundant over temperature protection Over pressure relief Open thermocouple detection Liquid spill detection EMO GFI/Earth Leakage
Safety Compliant	SEMI S2-0310 CE SEMI S8-0308
Warranty	Two-year standard, extended warranties available



DIMENSIONS AND INSTALLATION



Power	Voltage (50/60 Hz)		Current Ratings (Amps)		Heating Module
30 kW		380 415		45	3
30 kW				480	3
30 kW	208			100	3
36 kW				480	3
40 kW	208			125	4
50 kW	208			155	5
60 kW		380 415		95	6
60 kW				480	6
60 kW	208			185	6
72 kW				480	6
70 kW	208			215	7
80 kW	208			245	8
90 kW		380 415		140	9
90 kW				480	9
90 kW	208			275	9
100 kW	208			305	10
108 kW				480	9
120 kW		380 415		185	12
120 kW				480	12
144 kW				480	12
180 kW		380 415		480	18
216 kW				480	18

Refer to back page for determining the right heater size for your application.

DIMENSIONS AND INSTALLATION

Power	System Dimensions (cm/in)			System Weight
	A	B	C	kg/lbs
30 kW	178 cm 70 in	61 cm 24 in	51 cm 20 in	91 / 200 to 114 / 250
40 kW				
50 kW				
60 kW				
72 kW	178 cm 70 in	92 cm 36 in	51 cm 20 in	186 / 410 to 240 / 530
70 kW				
80 kW				
90 kW				
100 kW				
120 kW				
144 kW	178 cm 70 in	122 cm 48 in	61 cm 24 in	320/705
180 kW				
216 kW				

OPTIONS AND ORDERING

Use the code numbers for ordering the following options for your Quantum Deionized Water Heater.

HEATER	QTM	Quantum Deionized Water Heater
POWER	030	30 Kw
	036	36 Kw
	040	40 Kw
	050	50 Kw
	060	60 Kw
	070	70 Kw
	072	72 Kw
	080	80 Kw
	090	90 Kw
	100	100 Kw
	108	108 Kw
	120	120 Kw
	144	144 Kw
180	180 Kw	
216	216 Kw	
VOLTAGE	V208	208VAC 50/60 Hz, 3 Phase
	V380	380VAC 50/60 Hz, 3 Phase
	V415	415VAC 50/60 Hz, 3 Phase
	V480	480VAC 50/60 Hz, 3 Phase
THERMO-COUPLE	A	Titanium J-type, fast acting
	B	PFA coated J-type
OPTIONS	<i>Options are available at an additional cost:</i>	
	Contact factory for part number when requesting options.	
	Casters (Replace feet)	
	Modbus / RTU	
	Device Net	
	Analog Interface / Remote EMO	
Dual Multiple Outlet Plumbing		
Low Supply Pressure (>10 PSI)		

Example of an order number based on configuration options:

QTM	060	V415	A	07
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SIZING FORMULA

Required kW = 0.264 (Flow in GPM) (Temp Delta in C)

Conversion Calculations:

GPM = LPM/3.8

°C = 5/9(°F - 32)

Heater Sizing Formula Example

Ambient water temp = 25 °C

Desired process temp = 70 °C

Temperature delta = 45 °C

Required kW = 0.264(4 GPM)(45 °C) = 47.5 kW

For optimal temperature response and to compensate for seasonal changes in ambient water temperature, we recommend adding 25% excess heating capacity.

47.5 kW(1.25) = 57 kW. Trebor recommends a 60 kW heater for this application.



Trebor uses virgin PTFE and PFA in all products...no re-processed material is allowed.

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