

# TYTAN™ SPECIFICATIONS

<b>SIZES</b>	12,000 watts to 144,000 watts
<b>VOLTAGES</b>	208 volt to 480 volt, three phase (single phase available). Consult factory for specific wattage/voltage combinations available
<b>TEMPERATURE CONTROL</b>	PID microprocessor based digital thermostat
<b>TEMPERATURE LIMIT</b>	194° F (90° C), depending on operating conditions
<b>TEMPERATURE ACCURACY</b>	+/- 1° F, depending on operating conditions
<b>PRESSURE RATING</b>	100 PSIG (operating)
<b>EFFICIENCY</b>	> 99%
<b>WETTED SURFACES</b>	All titanium standard
<b>INLET/OUTLET</b>	1" MNPT through 72 kW 2" MNPT 96 kW and higher
<b>STANDARD SAFETY FEATURES</b>	<ul style="list-style-type: none"><li>• Grounded construction</li><li>• EMO emergency stop button</li><li>• Fluid overtemperature detection (J type thermocouple)</li><li>• Element overtemperature detection (bi-metallic snap switches)</li><li>• Control fusing (primary and secondary)</li><li>• FM approved overtemperature limit controller</li><li>• Ground fault protection (GFP)</li></ul>
<b>HOUSING</b>	NEMA 1 rated, powder coated metal enclosure
<b>DIMENSIONS</b>	<ul style="list-style-type: none"><li>• <b>12-48 kW:</b> 29.5" (75 cm) W x 13.5" (34 cm) D x 36.0" (91 cm) H</li><li>• <b>72 kW:</b> 37.5" (95 cm) W x 13.5" (34 cm) D x 36.0" (91 cm) H</li><li>• <b>96-144 kW:</b> 28.0" (71 cm) W x 17.0" (43 cm) D x 66.9" (170 cm) H</li></ul>
<b>STANDARD CERTIFICATIONS</b>	cUL
<b>OPTIONS</b>	<ul style="list-style-type: none"><li>• CE compliance</li><li>• Semi S2/S3 compliance</li><li>• PLC control</li><li>• Remote interface</li><li>• Disconnect and circuit breaker</li><li>• Stainless steel elements and wetted parts</li><li>• Flanged/sanitary fluid connections</li><li>• RS remote communications</li></ul>

## FEATURES and BENEFITS

- **Improved Process Results:** Heated DI water improves cleaning effectiveness and reduces rinse time in most processes.
- **Cost Saving Design:** >99% element efficiency contributes to low cost of ownership (COO) and excellent return on investment (ROI).
- **Outstanding Cleanliness:** 100% titanium heating elements provide very clean performance for precision cleaning applications.
- **Reliable, Rugged Construction:** Simple, heavy walled element construction for trouble free operation and long life. Baffled element chambers enhance heat transfer efficiency.
- **Outstanding Temperature Responsiveness and Stability:** Excellent temperature accuracy over a wide flow range can substantially improve process consistency.
- **Fast/Easy Maintenance:** Long-life element for minimal process down time. Designed for easy service.
- **Rapid Installation:** Minimal facility requirements. Heater is factory tuned to your specifications. Only power and plumbing connections required.
- **Compact Configuration:** Space-saving design minimizes footprint requirements. Wall mounted up to 72kW; floor mounted to 144kW.

# DIMENSIONS

## SIZING

To determine required wattage, use the following equation:

$$\text{GPM} \times \text{TEMP RISE (}^\circ\text{F)} \times 0.147 = \text{KW REQUIRED}$$

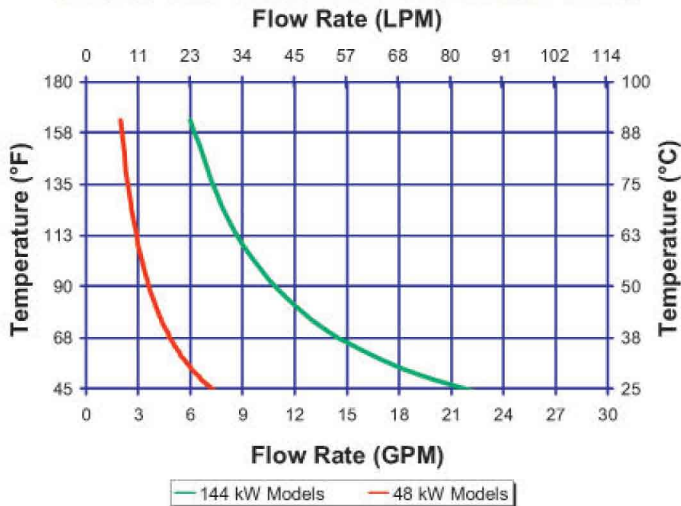
$$\text{LPM} \times \text{TEMP RISE (}^\circ\text{C)} \times .07 = \text{KW REQUIRED}$$

Temperature rise is expressed in degrees F where GPM is gallons per minute of flow desired. Round results up to select unit.

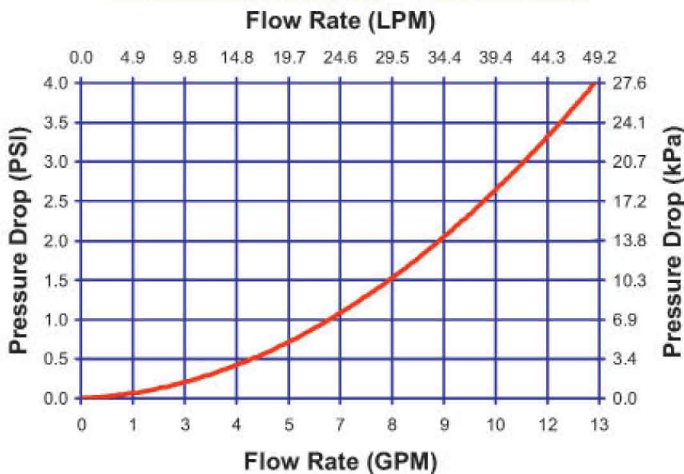
Example: 2.5 GPM x 95°F x 0.147 = 35 kW (Use 36 kW)

CONSULT OUR FACTORY FOR DETAILED SIZING INFORMATION AND APPLICATION ASSISTANCE.

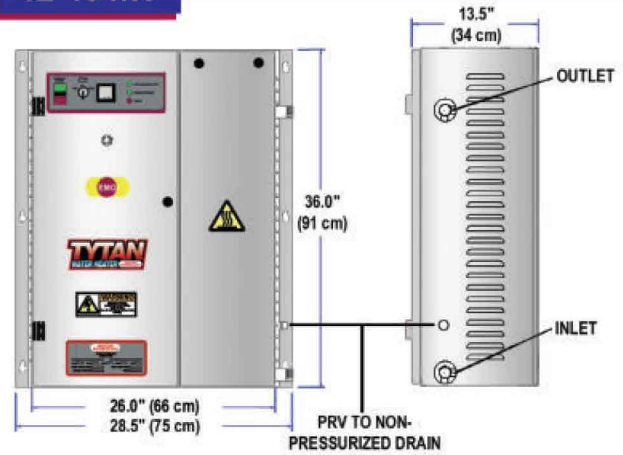
## FLOW VS. TEMPERATURE RISE ( $\Delta T$ )



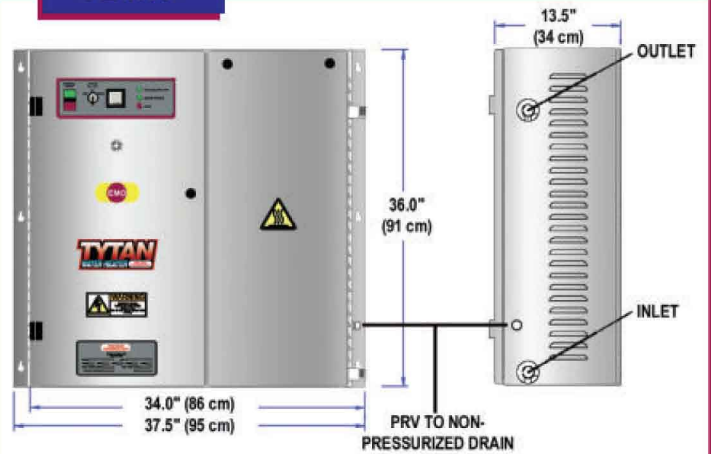
## PRESSURE DROP - ALL SIZES



## 12-48 kW



## 72 kW



## 96-144 kW

