

State of the Art Smart

PTC Element Technology

SmartOne heaters utilize Positive Temperature Coefficient (PTC) semiconductors as the heating element. Unlike traditional heating elements, they are SELF-LIMITING. As PTC elements heat up, their resistance to electrical current increases. You may already be familiar with PTC technology as it is used in hair dryers, curling irons, and car seat heaters.

Features and Benefits

Increased Safety

- SmartOne heaters can only reach a set maximum sheath temperature which is below the ignition point of most combustible materials (such as plastic tanks, see chart below).
- Unlike traditional immersion heaters with external thermal protectors, the safety of thermal protection is built into the design of the PTC chips. Therefore, it is impossible to bypass thermal protection.

Versatility

- Three voltage ranges are available: 100-120 volts, 200-240 volts, and 380-480 volts.
- The need for derated heaters for viscous solutions is eliminated because SmartOne heaters internally regulate heat output to match the environment.
- Available in 304 stainless steel, 316 stainless steel and titanium.

Easy Installation & Maintenance

No external thermal protection device required.
 No additional wiring needed for thermal protection devices.
 No equipment downtime due to thermal protection maintenance.

Notes:

- Temperature control is required to regulate process temperature.
- Liquid level shut-off device recommended.
- As with any heater, periodic cleaning is recommended. Scale and sludge can increase the rate of chemical corrosion on the heater sheath.

