

# Plasta-Therm™

A REVOLUTIONARY, ENERGY-SAVING SYSTEM  
ASSURING THERMAL RETENTION OF  
THE CONTENTS OF FRP TANKS.



**Plas-Tanks**  
INDUSTRIES, INC.



# Plasta-Therm™ : better from the bottom up



Gone are the days when to heat the contents of a fiberglass-reinforced plastic tank you had to wrap several bands of heating tape around it, connect the bands with jumper wires, coat the whole thing with polyurethane foam and a fiberglass skin, then cut ports through the insulation to install unreliable capillary bulb thermostats.

Gone, too, are the worries that came with that old-fashioned wrap-around tape: will it overheat? will it underheat? will it damage the tank... or the tank's contents? What if the tape goes bad and has to be repaired or replaced, under all that protective covering?

Plas-Tanks' new Plasta-Therm eliminates all those concerns and drastically reduces operating costs with a system that is simple, efficient, and trouble-free.

It's available with any of the vertical or horizontal FRP tanks that Plas-Tanks designs and manufactures for the chemical process industry, or it can be readily installed, in the field, in existing insulated FRP tanks.



Conventional Tape



Plasta-Therm

The Plasta-Therm heating element consists of a fine-gauge, standard, nickel clad resistance wire encapsulated in braided "E" grade fiberglass. Plas-Tanks lays the Plasta-Therm element on the bottom of the FRP tank and seals it into the structure with a 120-mil barrier.



Conventional Installation



Plasta-Therm Sandwich Installation

The Plasta-Therm element thus becomes an integral part of the tank itself. Protected by its own fiberglass braiding and by the fiberglass of the tank both above it and beneath it, the element is almost damage-proof.



Conventional Installation



Plasta-Therm Installation

Plasta-Therm is much more efficient than outside, wrap-around tape. Plasta-Therm introduces heat at the bottom of the tank so that the heat can do what it does naturally—rise directly into the liquid above it. Wrap-around tape, on the other hand, has to transmit heat sideways through thick, insulating FRP walls. Hence Plasta-Therm produces more usable heat per KWH of electricity than is possible with conventional outside tape.

The Plasta-Therm element is controlled by a solid-state system that senses the temperature of the contents of the tank. The much more complicated capillary bulb thermostat used with wrap-around tape reacts to the temperature of the tape itself—not to the tank's contents.

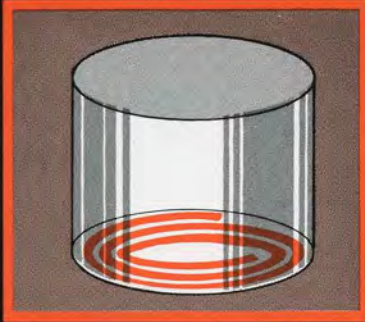


The Plasta-Therm solid-state system maintains a temperature of  $\pm 3^{\circ}\text{F}$ , a degree of accuracy that is virtually impossible to achieve with conventional tape.

The Plasta-Therm system eliminates the need for troublesome thermowells, capillary ports, and jumper wires.

Should a Plasta-Therm system ever fail for any reason—a highly unlikely event—the problem can be corrected quickly by simply laying another element on the bottom of the tank, right over the failed element, and laminating a new 120-mil fiberglass barrier over it.

Plas-Tanks' new Plasta-Therm system solves the problems that have long been considered necessary evils of outside heating tapes. More important, it provides the most accurate, efficient, reliable method of heating process-chemical tanks ever developed.



Plasta-Therm heating systems are available with any Plas-Tanks insulated FRP vessel, or they can be installed in the field in any existing insulated tank.



The Plasta-Therm element—resistance wire encapsulated in fiberglass—is laid onto the bottom of the tank.



The element is bonded to the FRP tank with a coating of resin.



Chopped fiberglass strands are sprayed onto the coating of resin, forming an integral FRP laminate.



The laminate coating is rolled to a consistent 120-mil thickness. When it has set, it is in every sense a part of the original FRP tank. The Plasta-Therm element then is in place, ready to heat, and protected from damage from any source.

