



# LO-DENSITY<sup>®</sup> UNITIZED STORAGE TANK HEATERS

## **The Cost Effective Choice - applications for;**

- **OIL RECYCLING, LUBE OILS**
- **GREASE, EMULSIONS**
- **OIL ADDITIVES**
- **BIOFUELS**
- **ASPHALT/CONSTRUCTION**
- **FOOD PRODUCTION**
- **INK MANUFACTURING**
- **PULP AND PAPER**

Unitized Heaters remain Process Heating Company's best selling product line. Its popularity continues due to the ease of installation into any tank or vat; its 100% efficiency; its ease of automation; its lack of maintenance and remarkable reliability.

The "Lo-Density" Unitized Heater dissipates as low as three watts per square inch on the heater sheath. Temperature sensitive materials are those which become damaged when too much heat is applied too quickly. Such products need to be heated by a carefully controlled system that reduces the viscosity so the material can be utilized in industrial applications. This makes the PHCo Unitized Heater viable with most temperature sensitive products for industry.

Unitized Heating systems are designed for easy installation. Tanks can be vertical or horizontal because dimensions are adjustable. Installation is achieved by cutting a rectangular opening near the bottom of the tank. Heating elements / U.L. Listed control panel assembly is slid into place. PHCo heaters are far less trouble to install than coils for steam or heat transfer fluid because they are direct immersion heaters. No additional energy source is required. Simply hook up to utility or Gen-set power.

Unitized Heaters can be interfaced with other electrical equipment so the load of the heaters can be reduced to base rates and not incur demand charges or peak use rates, making our 100% efficient heaters even more cost effective.

Our heating elements have a five year warranty and require no maintenance other than an annual check-up.

- Features:**
- **Heater materials** – mild steel and various grades of stainless steel
  - **Sheath thickness** – up to .300" wall thickness for durability and corrosion resistance
  - **Kilowatt ratings** – up to 1,000 kW
  - **Watt Densities** – up to 20 watts per square inch, less than 10 is standard
  - **Voltages available** – up to 600 VAC, single or 3 phase
  - **Immersion length** – up to 40 feet
  - **Terminal enclosure** – Moisture resistant standard. Some sizes available as explosion resistant
  - **Open coil elements** – Pipe insert type, drywell elements for ease of service



# SIZING CHART

PHCO Lo-Density® kW requirements for storage tanks at different temperatures.

<b>Tank Volume Gallons</b>	<b>To Maintain 125°F</b>	<b>To Maintain 180°F</b>	<b>To Maintain 250°F</b>	<b>To Maintain 325°F</b>
1,000	4kW	7kW	10kW	15kW
2,000	5kW	8kW	14kW	18kW
3,000	6kW	10kW	16kW	22kW
4,000	7kW	12kW	18kW	24kW
5,000	7.5kW	12.5kW	20kW	26kW
6,000	8kW	14kW	22kW	28kW
8,000	9kW	16kW	26kW	30kW
10,000	11kW	18kW	30kW	34kW
12,000	12kW	20kW	32kW	36kW
15,000	14kW	22kW	35kW	44kW
20,000	16kW	25kW	40kW	52kW
25,000	18kW	28kW	46kW	60kW
30,000	20kW	32kW	50kW	68kW
40,000	22kW	37kW	60kW	84kW
50,000	24kW	42kW	68kW	100kW

Above ground tanks must have minimum 3" of fiberglass (or similar) insulation and weatherproofing.

These recommended capacities include sufficient heater rating to maintain the temperature shown, plus a reserve capacity for heat-up requirements, The calculations are based on a 40°F ambient temperature. For unusual or extreme conditions and for uninsulated tanks, consult the Factory @ (206) 682-3414.



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