

# Thermal Solutions for Power Generation





# CIRCULATION HEATERS

Phillips and Temro offers a full line of circulation heaters that are designed, tested and validated to meet OEM standards.

- Provides engine warming for quick, clean starts
- Reduces time to reach operating temperatures and full-load acceptance
- All products are equipped with a safety thermostat to prevent overheat conditions

### **Thermosiphon Heaters**



Circulation Tank Heater (0.75 kW to 2.25 kW)



Thermogen (3.0kW to 4.0kW)



ThermoStart (0.5 kW to 4.0 kW)

#### **Forced Flow Heaters**

with integrated circulating pumps for even heat distribution



FlowStart (0.5 kW to 2.5 kW)



Forced Flow Circulation Heaters (1.5 kW, 2.7 kW)





**TopStart** (0.5 kW to 12.0 kW)

### **Biodiesel and Oil**



**TopStart Biodiesel and Oil** (1.0kW-2.7kW)



# IN-LINE FUEL & FLUID WARMING

Phillips & Temro offers a complete line of fuel and fluid heaters that deliver the perfect solution for dependable engine operation in cold weather.

#### I-909 & I-15

- Most versatile, multi-purpose in-line warmer
- Diesel & biodiesel up to B100 compatible
- Thermostatically controlled 78°-95°F (25°-35°C)



#### Hotline® Electric Heater

- · Compatible with all biofuel blends
- Compatible with coolant heaters for complete fuel system protection
- Thaws frozen diesel fuel in only 3-4 minutes



Phillips & Temro offers a complete line of products to meet all thermal requirements of power gensets.

#### Hotfox™

- Diesel and Biodiesel compatible
- Shut-Off Thermostat available
- Rotates for easy mounting



#### Multi Fuel & Fluid

- Diesel, biodiesel up to B100, hydraulic, engine oil, transmission & other fluid compatible
- No moving parts maintenance free
- Longest in-line fuel warmer for maximum heat transfer



#### Compressed Natural Gas Fuel Heat Exchangers™

- Keeps natural gas from dropping below the accepted engine temperature
- Raises the fuel pressure as it is heated
- Integral thermostat option available





# IMMERSION HEATERS AND HARNESSES

There are a variety of harnesses available, including Y-Cords that connect the heater to a thermostat for energy efficiency.

• Reliable engine starts and operation

• Reduction of engine wear and stress on other components

Fewer emissions

 Keeping the engine warmer than the surrounding ambient temperature reduces condensation in the engine sump

Wattage options: 150 to 1500

Input Voltage: 120, 230, 240

Immersion heaters provide direct heat to the engine coolant or oil to ensure quick starts and reduce engine wear.





### **FANS**

Phillips & Temro offers a comprehensive line of axial fan products from single piece molded to hybrid to custom steel applications.



One Piece Molded



Hybrid



**Custom Steel Applications** 

Our fans are offered in a variety of materials and blade profiles.

- Metal Spider Fans: 10-72 in (25.4-182.9 cm)
- Metal Segmented Fan: 59-118 in (149.9-299.7 cm)
- One Piece Molded Fan: 12-39 in (30.5-99.1 cm)
- Hybrid Fan: 12-65 in (30.5-165.1 cm)

- Reversible Fans: 22.8-53 in (57.9-134.6 cm)
- Modular Fans: 11-39 in (27.9-99.1 cm)



# SILICONE PAD HEATERS

These durable engine heaters are designed to provide warmth to areas with fluid susceptible to freezing or thickening such as oil pans, fuel filters and crank case breather valves. CE and CSA approved silicone pads are available.

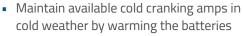
- Adhesive silicone pad heaters warm internal engine components for quick starts in cold weather
- Reduces engine wear by improving the flow of engine oil
- The diesel fuel filter provides heat to the fuel filter prior to start up to prevent filter clogging
- Improves battery recharge time with efficient direct heat transfer

Silicone pad heaters are easily installed with adhesive mounting and silicone weatherproofing for installation on smooth metal surfaces.



## BATTERY HEATERS

Battery heaters are placed close to your engine batteries to maximize performance. Our heaters are available in a variety of sizes to meet your demand.



Efficient direct heat transfer

 Four heating options available – silicone pad, blanket, box heater, and coolantbased warmer

 For rental applications and other shortterm heating applications

• UL Recognized, cCSAus certification.

 Thermostatically controlled; on at 60°F(16°C) and off at 80°F (27°C)





### Power To Rely On – Across the Globe

Phillips & Temro Industries creates quality heating and cooling products that improve the performance of your stationary or portable power generator. PTI offers both standard or custom heating and cooling products for generators. We have offices, distributors, and manufacturing facilities worldwide.

#### For More Information

Please visit www.phillipsandtemro.com/locations or contact sales@phillipsandtemro.com

