

**INSTALLATION
INSTRUCTIONS**

**In-Line Fuel Warmers
(With Thermostat)**



CAUTION

Failure to follow these important safety messages can cause serious injury and property damage.

- Not for use with gasoline, ethanol, natural gas, propane, etc
- Designed to work at <50 psi in a diesel type fuel system

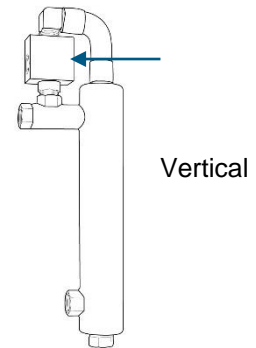
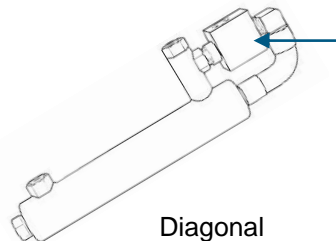
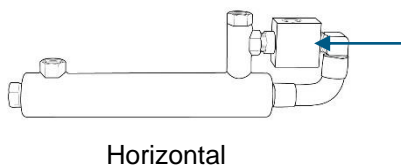
INSTALLATION LOCATION

Mount lower than the coolant expansion tank (lower than the highest point in the coolant system) to avoid air entrapment resulting in poor coolant circulation.

MOUNTING & INSTALLATION

Using appropriate mounting hardware, the in-line fuel warmer can be frame or engine/transmission mounted in either the horizontal, diagonal or vertical position. Thermostat must be located at the top for all installations, see diagrams below. To provide maximum cold weather protection, the in-line warmer must be located as close as possible to the primary fuel filter or water separator. Some engine applications may not be equipped with a primary fuel filter between the tank and transfer pump. In this situation, locate warmer as close as possible to the transfer pump.

Correct Product Orientation
Thermostat is located at the top.



COOLANT SUPPLY

Obtain hot coolant from a pipe plug opening on the engine pressure side (outlet side of the water pump) of the cooling system. Route coolant to the properly labeled inlet port on warmer.

COOLANT RETURN

Route coolant from unused "COOLANT CONNECTION" on warmer back to engine pipe plug on suction side of engine water pump.

FUEL

Route fuel line from tank to the "FUEL INLET CONNECTION" on the fuel warmer. Connect "FUEL OUTLET CONNECTION" to the primary fuel filter inlet or to transfer pump inlet if engine is not equipped with a primary fuel filter. If more than 24 inches (610 mm) of fuel line is installed between the warmer and filter/pump, it is recommended that the line be insulated with ARCTIC FOX TUBE INSULATION of the proper inside dimension to fit the line. Always use equipment manufacturer fuel line.

NOTICE

- Failure to follow installation instructions may result in poor performance.
- While it is physically possible to interchange fuel and coolant connections in pairs, heat transfer efficiency may be reduced by up to 43% on fuel systems which flow over .5 GPM (1.9 LPM).
- For the most efficient operation of fuel warmers, it is **recommended** that a separate coolant loop be provided. Do NOT plumb in series with other accessories unless you are controlling the coolant flow to an additional heat exchanger.
- If all access ports on the engine are being used for other accessories, such as cab or sleeper heaters or coolant sensors, the Wye's may have to be considered as an option. If needed, use Wye's in coolant supply and return lines in parallel with cab heater or other circuits. In this circumstance, the Wye's must be appropriately sized for the fuel warmer and should be installed at the engine or as close to the engine as possible.

HELPFUL HINTS

If an in-line fuel warmer is used with an optional in-tank warmer without thermostat, both can be plumbed in series in the same coolant loop. However, the hot coolant from the engine coolant supply should first pass through the in-line warmer, then on to the in-tank warmer. This will allow maximum anti-waxing protection to the primary fuel filter upon initial startup after an extended "cold soak" period. For additional cold weather protection, especially below 0° F (-18°C), Arctic Fox tube insulation can be added to all fuel and coolant lines to reduce external heat loss.

WARRANTY

The Phillips & Temro Industries warranty statement is located on the website at phillipsandtemro.com/terms