



Features

- Uses a LPG propane-fueled catalytic heater without open flame
- Prevents accumulation of frozen precipitation that can dampen the acoustic signal of Triton Wind Profiler and reduce wind data recovery rates
- Ensures year-round optimized performance for Triton Wind Profiler on sites prone to snowfall or icing
- Includes the Triton Cold Weather Package extended battery option by default

Vaisala Triton Snow Removal Package is a winter weather solution for operating the Triton at measurement sites prone to snowfall and icing conditions. It is a propane-fueled, catalytic mirror heater system that prevents snow and ice from accumulating on the Triton mirror.

Snow Removal Package

Snow on the mirror may block the transmitted and received sound beams and is detrimental to data quality. Vaisala Triton Snow Removal Package, located entirely within the Triton battery compartment, uses circulating fluid to keep the aluminum sound mirror warm, preventing the accumulation of snow and ice. A propane-fueled catalytic heater warms the circulating antifreeze which is pumped through tubes behind the mirror, in a radiator-style design.

Safe Operation

After the pre-heat process, the heater runs on propane gas, but unlike most heaters, it does not have an open flame. Rather, the propane is fed into a pre-heated glass fiber mesh of catalyst material. The mesh supports a chemical reaction that produces heat, carbon dioxide, and water vapor. This type of heater is much safer than those with an open flame, as the temperature is much lower. Excess heat, carbon dioxide and water vapor are vented outside the Triton through an exhaust hose.

The heater is designed to use propane LPG. An LPG with high butane content does not vaporize in freezing temperatures so gas is not delivered to the heater.

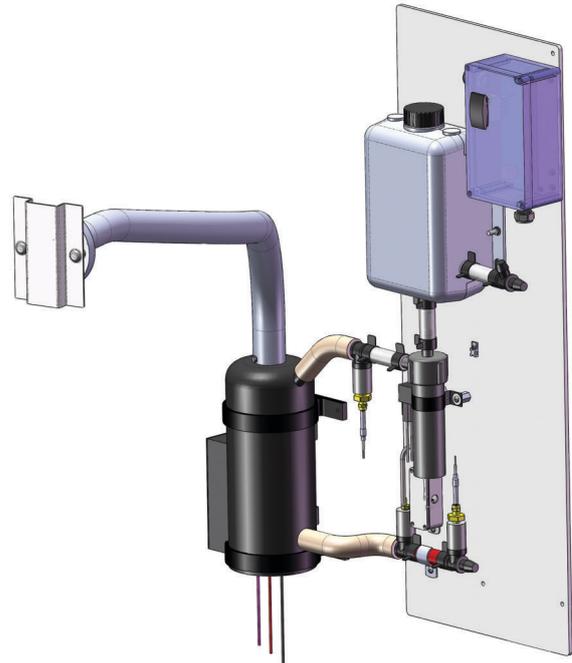
Remote Operation

The Vaisala monitoring team controls the heater over a remote data link. Various Triton sensor and atmospheric data and local weather feeds determine if the mirror must be cleared of ice and snow.

Technical Data

Mechanical Specifications

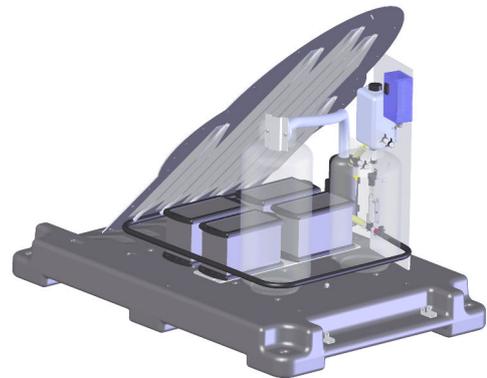
Plumbing	Aluminum EPDM Nylon
Antifreeze	Environmentally safe propylene glycol rated to -73 °C (-100 °F) -73 °C (-100 °F) burst protection and -50 °C (-58 °F) freeze protection 6 l (1.5 gal) volume required
Fuel	LPG (propane)
Fuel consumption	160 ml (5.4 fl oz) / h
Fuel capacity	Triton enclosure has room for one 13.61 kg (30 lb) and one 18.14 kg (40 lb) cylinder Available propane cylinders vary by geographic location. Contact us for information on connecting the propane cylinders that are available in your region.
Run time	Up to 200 h of mirror heater system operation with 31.75 kg (70 lb) of fuel
Heater control	Intelligent system with remote control capability
Preheat cycle	5 min
Mirror temperature	Heats mirror to approximately +20 °C (+68 °F) at ambient temperature of 0 °C (+32 °F)



Detail showing heater and pump assembly

Inputs and Outputs

Average power consumption	10 W during the snowy season 7 W at other times
Batteries	Runs on standard Triton batteries



Cutaway view of Triton with Snow Removal Package. Propane cylinders are supplied by customer, and are shown as transparent.



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