Anti-Icing System

Product Description

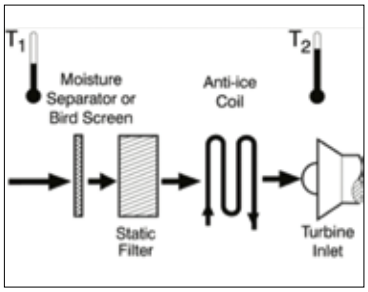
- Inlet icing can occur on LM series turbines at temperatures less than 40°F (4.4°C) and humidity greater than 65%.
- Ice formation can lead to significant ice debris and thus turbine blade damage.
- Waste heat from the combustion inlet air is used to heat the inlet air by 10 to 40°F above ambient temperature, preventing icing.
- **The waste heat recovery system is a skid placed alongside the turbine, consisting of:**
  - Pump system using a closed loop of glycol-water.
  - Chilling coils.
  - Air filter house.
  - Heat Exchanger connected to the combustion inlet air Waste Heat Recovery Unit (WHRU)
- Control logic allows system to be idle if icing is not present and to activate when icing detected. **There are 4 total states:** idle, anti-icing, air-purge, and full purge.
- This system does not come standard with the LM series packages.

Applicable Units:

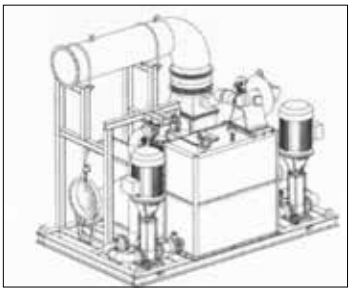
LM6000	✓	LM2500	✓
LMS100	✓	LM5000	✓
LM1600	✓	TM2500	✓

Customer Value

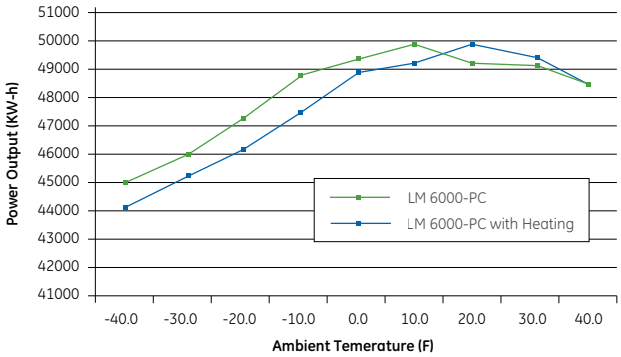
- Anti-icing system prevents ice related internal damage to engine blades, reducing turbine downtime and repair times.
- Anti-Icing system controls are automated to run only when ice detected.
- Increased efficiencies and power outputs as shown in the graph to the right.



Schematic of anti-icing system



Anti-Icing WHRU



LM6000-PC Estimated Power Output

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