



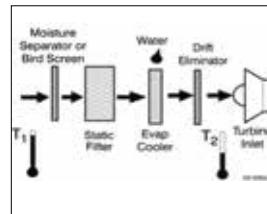
Evaporative Cooling System

Product Description

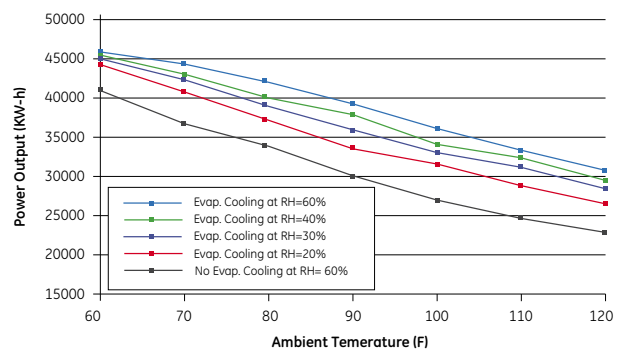
- An evaporative cooling system for turbine inlet air is a useful option for installations where high ambient temperatures and low relative humidity are common.
- The evaporative cooling system will cool compressor intake air through humidification.
- The intake air will have a higher relative humidity and lower temperature.
- Inlet air cooling will increase the air mass flow rate and pressure ratio, yielding higher turbine output power and efficiency..
- **The system consists of:**
 - Evaporative cooling unit bolted to the incoming air face of the filter house.
 - A single bank of evaporative cooling media made of corrugated layers of fibrous material, allowing minimal air pressure loss. Water flows down the channels by gravity. The media consists of 2 modules.
 - The bottom module features a sump containing the pump and fill valves.
 - The upper module has a drain pan and piping to cycle water back to the sump.
 - A drift eliminator to limit water entering the turbine.
- Some units may have the evaporative cooler pre-installed, others will require the filter house to be opened.
- To control the inlet chilling system, GE will provide a modular hardware style PLC.

Customer Value

- Significantly increases turbine power output.
- Increases thermal engine efficiency.
- PLC integrated controls sample weather conditions every 30 seconds, allowing rapid adaptability to changing conditions
- PLC integrated controls system allows evaporative cooling system to work as a stand alone unit, limiting control integration complexity. Only alarm systems need to be integrated in.
- Adaptable to extrinsic control systems.



Schematic of Evaporative Cooling System.



Increased Power Output of LM6000 Engine at Various Humidities.

Applicable Units:

LM6000	✓	LM2500	✓
LMS100		LM5000	✓
LM1600		TM2500	

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