

Electric Motor and Inverter Cooling System

Recognition of Need

- Functional and mobile cooling system needed to manage heat generation in electric motor and inverter
- Control system to regulate fan speed and monitor/record temperatures and flow rates

Problem Definition

- Motor Winding Temperature: $< 150\text{ }^{\circ}\text{C}$
- IGBT Temperature: $< 175\text{ }^{\circ}\text{C}$
- Coolant Temperature: $20\text{ }^{\circ}\text{C} \leq T \leq 70\text{ }^{\circ}\text{C}$

Concepts

- **Single Pass Crossflow Radiator System (Selected)**
- Dual Pass Crossflow Radiator System
- Down Flow Radiator System

