

## Electronic Thermal Cooling Frequently Asked Questions

**Q: How much fuel will I save compared with a mechanical cooling pack?**

**A:** This depends on the efficiency of the original mechanical pack, the route, the loading of the vehicle the climate and several other variables, however somewhere between 5 - 15%.

**Q: How much electricity does the pack use and will I need to upgrade the original alternator?**

**A:** In normal operation a 6 fan pack uses an average of around 12 AMPS so it is not normally necessary to upgrade the standard alternator. NOTE: Additional fuel savings can be achieved by using a high efficiency alternator.

**Q: Will an electronic thermal cooling pack reduce noise?**

**A:** An electronic cooling pack will reduce noise compared with a mechanical equivalent under normal bus operation.

**Q: What maintenance and cleaning is required?**

**A:** The components are all maintenance free and as the pack is configured in a side by side configuration and fitted with a reverse mode for testing the fans and cleaning. This means the cooling pack life is greatly extended when compared to a traditional mechanical system which can easily become clogged and is difficult to clean.

**Q: What about the reliability of the system especially in hot weather?**

**A:** The system is considerably more reliable than a mechanical equivalent as it has a bank of several fans which provide a certain degree of redundancy should any one part of the system develop a fault—unlike a mechanical system which would stop the bus in the event of a technical issue. The system also has a greater degree of control so it is better designed to cope with sudden surges of heat in the cooling module.

**Q: Can an electronic cooling pack be retrofitted to any bus?**

**A:** Yes, it is possible to design a pack for any vehicle however some development cost is involved when a specific vehicle pack is being developed for the first time.

**Q: How long will the components last in a hostile environment such as a city bus engine bay?**

**A:** The components are unique in that they have been specifically designed for heavy duty city bus applications and they are designed to last the lifetime of the bus.

**Q: What about dirt and water ingress from general use and steam cleaning or pressure washing?**

**A:** All components are fully sealed to IP67 standards and can withstand submersion in water however it is not good practice to subject any electronic devices to prolonged direct high pressure washing or steam cleaning.