

# SCHOOL BUS HEATERS THAT PROVIDE MORE THAN JUST COMFORT





## ESPAR E-GUARDIAN THE IDEAL COMFORT SYSTEM!

Espar Heater Systems manufactures small supplemental air heaters and coolant system heaters suitable for school buses. Coolant heaters will pre-heat the engine on a timer for easy morning startup to get the buses rolling faster on the route. The heaters ensure defrosted windows and also add more heat to the passenger compartment to keep the driver and children warm and safe. Espar heaters eliminate the need to idle in the compound or in front of schools to warm the bus.

- The heaters operate on a very small amount of diesel fuel (or biodiesel) already on the bus.
- Available to retrofit on your existing buses or OE installed.
- Espar is listed on the EPA website as an idling solution and is CARB approved as an Ultra Low Emission Vehicle (ULEVII).

### E-GUARDIAN AIR HEATERS

#### AIRTRONIC D2 & D5 Series

AIRTRONIC units range from 7,500 BTU's to 18,800 BTU's, are compact and provide fast warm air replenishment and perfect for special needs and trip buses.

### E-GUARDIAN COOLANT HEATERS

#### HYDRONIC MII Series

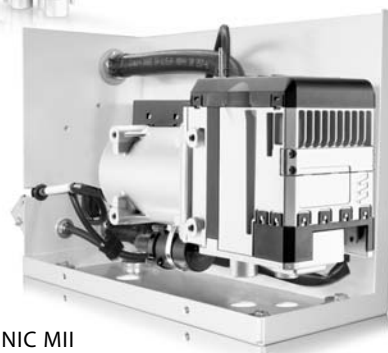
- The E-Guardian 5 is rated at 17,000 BTU's and is designed for engine pre-heating with auxiliary heating.
- The E-Guardian 12 is rated at 42,000 BTU's and is designed for pre-heating and auxiliary internal heat. It offers the latest in heater technology, is compact and lightweight, provides automatic altitude compensation and has multiple operating speeds for reduced power and fuel consumption, all as standard features. E-Guardian coolant heater kits come with everything required for installation. E-Guardian heaters are inexpensive to operate, require minimal maintenance and provide true cost-effective idle reduction.

### CONTROL OPTIONS

- **Programmable Timer** can be set to turn the heater on and off up to 8 times a day, multiple times a week (weekdays, every other day, weekends...) one time set up, no operator interaction is needed.
- **Multi-function Switch** has push button operation with programmable low voltage disconnect and run time setting.
- **Digi-Controller** has diagnostic capability, temperature display, ventilation, compact, user friendly.



AIRTRONIC D2



HYDRONIC MII

**IDLE REDUCTION SOLUTION**

Fuel Operated Heaters: these small units can be used anywhere the bus goes and can start early in the morning on a programmed timer. They not only pre-warm the engine but can also provide supplemental heat to the bus passenger compartment. The heaters have a proven track record, are listed on the EPA website as an anti-idling solution, and use a small fraction of the fuel that it would take to idle an engine. These heaters prolong the life of the bus engine because of reduced running hours and reduce the frequency of bus oil changes. Fuel operated heaters are available as a factory option on a new bus or may be installed on buses already in the fleet.



Unnecessary idle causes wasted fuel, wasted money and pollution.

**E-GUARDIAN HYDRONIC MII HEATERS**



		HYDRONIC D5	HYDRONIC D12
Heat Output	BTU/hr	8,200 - 17,000	4,095 - 42,000
Fuel Consumption	US. gal/hr (l/hr)	0.08 - 0.16 (0.27) - (0.62)	0.04 - 0.40 (0.15) - (1.5)
Electrical Consumption	amps 12V	1.9	2.8
Water throughput	US gpm (l/hr)	4.0 (900)	6.1 (1400)
	Max Min	1.1 (250)	2.2 (500)
Weight	lb (kg)	6 (2.7)	13.7 (6.2)

**EASY TO OPERATE**

E-Guardian heaters operate like miniature furnaces. The heater uses diesel fuel and battery power independent from the busses engine to produce heat.

**EFFICIENT**

E-Guardian Hydronic units heat the coolant, then circulate it to warm the engine and heat exchangers to near operating temperature and can be sized to provide auxiliary heat for other critical fluids. The AIRTRONIC heaters produce warm air directly and circulate air like a furnace for compartments warmth.

**PRODUCTIVE**

Using timer controls, E-Guardian heaters can be switched on to begin engine pre-heating at preset intervals, allowing operators to go directly to work upon arrival.



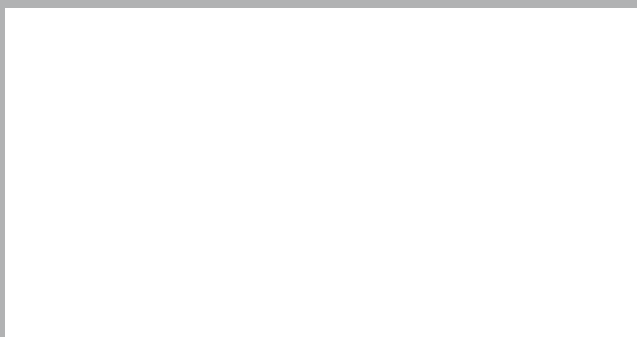
Timer included with kit

ISO / TS 16949:2009 Certified  
ISO 14001 : 2004

Espar's full line of heating systems can be used in many applications, such as trucks, buses, motorhomes, off-highway equipment, marine and more.

Contact your local dealer for more information.

A member of the Worldwide **Eberspächer** Group of Companies.



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