

CLIMATE COMFORT | E-GUARDIAN PLUS FOR SCHOOL TRANSPORTATION

**E**Guardian<sup>PLUS</sup>  
series

THE NEXT GENERATION IN SCHOOL BUS PREHEATING



A WORLD OF COMFORT





## ESPAR'S E-GUARDIAN PLUS AUXILIARY PREHEATING KITS FOR SCHOOL BUSES

With the E-Guardian Plus Series, Espar Climate Control Systems brings state-of-the-art technology to the school bus market. By combining all the best features of the E-Guardian Series with new features that improve efficiency and performance like Espar's Multi-Max F1000 digital controller and Auto-Reset Impact Switch, the E-Guardian Plus Series represents the cutting edge of preheating technology in today's market. Trust the E-Guardian Plus Series to provide the ideal anti-idling climate solution for any bus or fleet.

### E-GUARDIAN PLUS COOLANT HEATERS

The E-Guardian Plus D5 and M-II units are specially designed to provide powerful preheating and auxiliary internal heat for bus applications. Units offer the latest in heater technology, are compact and lightweight, and provide automatic altitude compensation.

Espar's M-II heaters have the additional option of six operating speeds for reduced battery draw and fuel consumption.

Kits are readily available as an OEM factory installation or for retrofit in the field, and come equipped with everything you'll need for operation. E-Guardian heaters are inexpensive to operate, require minimal maintenance, and provide a cost-effective solution to engine idling.

### NEW E-GUARDIAN PLUS FEATURES

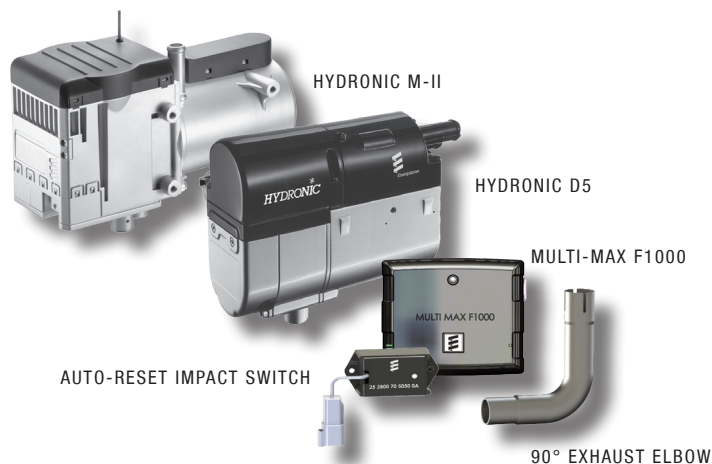
- Espar's Multi-Max F1000 digital controller, increasing ease of use and heater functionality with set-and-forget programming
- Espar's Auto-Reset Impact Switch to ensure startability in rough terrain
- Refined 90° exhaust elbow for easier maintenance and installation

### ESPAR'S AUTO-RESET IMPACT SWITCH

- Switch will automatically reset after sensors are tripped, saving a technician performing a manual reset and ensuring a reliable start
- Reset is automatic the next time the driver 'turns the key' to start the bus



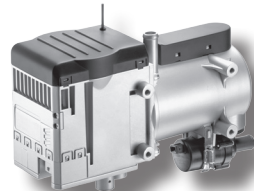
### THE IDEAL SOLUTION FOR AN EFFICIENT FLEET

All E-Guardian heater kits incorporate technology that use a fraction of the fuel and power consumed by a standard heater and can reduce idling and emissions by up to 90%. Thanks to this technology, E-Guardian Plus Kits are verified with EPA and have CARB approval as anti-idling solutions, making them the ideal energy-saver for your bus or fleet.





## ESPAR'S E-GUARDIAN PLUS TECHNICAL DATA

				
COOLANT HEATERS		HYDRONIC D5 SC	HYDRONIC D5 E	HYDRONIC M-II **
Heat Output (kW/BTU)	Boost High Low	— 5.0 / 17100 2.4 / 8200	5.2 / 17755 5.0 / 17100 2.1 / 7170	— 12 / 42000 1.2 / 4100
Fuel Consumption (l/hr / US gal/hr)	Diesel 1/2 Boost High Low	— 0.62 / 0.16 0.27 / 0.07	0.64 / 0.17 0.61 / 0.16 0.26 / 0.07	— 1.5 / 0.40 0.15 / 0.04
Fuel Metering Pump		External	External	External
Electrical Consumption (amps) (12V shown, 12V or 24V available)	Boost High Low	— 4.2 1.9	3.3 3.1 1.0	— 11.0 2.8
Coolant Pump		Internal	External	External
Weight (kg/lbs)		2.9 / 6.4	2.4 / 5.3	6.2 / 13.7

\*\*Espar's Hydronic M-II has six operating levels, output data shown in chart represents highest and lowest operating levels

### ESPAR'S MULTI-MAX F1000 CONTROLLER

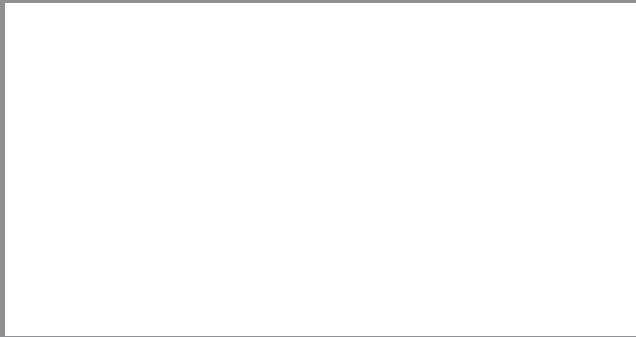
- Easy, one-page PC setup
- Multiple on/off events daily
- Driver access limited to one push button for heater "ON" with automatic timed "OFF"
- Set-and-forget controls for the school year
- Ability to skip school holidays automatically
- High ambient temperature disable
- Built-in diagnostics and low voltage disconnect
- Event log

\*Other control options available



### ESPAR'S AIR PREHEATERS FOR BUS APPLICATIONS

Espar's Airtronic preheaters operate like miniature furnaces, blowing warm air for effective, temperature-controlled interior heating. Heaters use minimal amounts of the vehicle's own fuel and power. Espar's Airtronic heater is the ideal solution for school buses, special needs applications, motorcoaches, and shuttle buses where cabin heat is needed without the engine idling.



**Espar Products, Inc.**

(800) 387-4800

(905) 670-0960

[www.espar.com](http://www.espar.com)

