



Espar Heating Products

Thermo King proudly offers Espar heater systems for the ultimate in idle reduction and driver comfort.



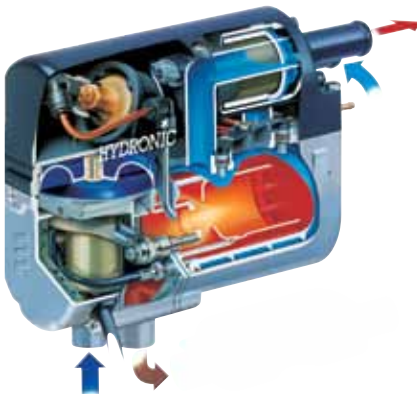


Take a look at how Espar Heating Systems can benefit your business:

Thermo King, the world leader in transport temperature control, has partnered with Espar, the world leader in fuel-fired air and coolant heaters, to bring you quality Espar products. Over the past 60 years, Espar heaters have been proven to save money and increase driver comfort. Engine pre-heaters provide excellent startability in cold environments and air heaters provide comfort or cargo heat, burning much less fuel than a large engine. Save engine wear, extend engine life and cut maintenance costs by reducing idling!

Why choose Espar heaters from Thermo King?

- Less idling means lower fuel costs and reduced maintenance
- Meet increasing number of anti-idle noise and pollution laws nationwide
- Keep drivers warm and comfortable
- Models available for a variety of applications
- Expert Thermo King installation and service



Backed by the Thermo King Dealer Service Network

When you purchase any Espar product at a Thermo King dealer, you can rest assured knowing you're backed by the Thermo King dealer service network with over 200 locations nationwide.

Save Fuel & Money

Espar heaters eliminate the need to idle the truck for heat. A typical tractor engine uses approximately one gallon of fuel per hour idling. An Espar air heater uses less than 0.06 gallons per hour — just one gallon per 16 hours! An active driver can save over a thousand dollars per year and may realize a return on investment in one heater season!

As an additional time and money-saving feature, Espar engine pre-heaters can turn on via timer, removing the need for a driver to be present to warm a diesel engine.

Enhance Driver Comfort and Increase Driver Retention

Espar heaters efficiently warm and maintain the bunk temperature. Drivers can relax comfortably and quietly at night without the vibration, engine noise and fumes from the idling engine. A well-rested driver is a safer driver.

Espar heaters are seen as valuable benefit by drivers, which can lead to a reduction in costly driver turnover.

Comply with Anti-Idling Regulations and Stricter Emissions Standards

An idling truck, on average, produces over 20 tons of greenhouse gases per year. Many countries, states and local municipalities are taking measures to minimize the impact to the environment by passing idling restrictions. Over 25 U.S. states and Canadian provinces currently restrict idling. Keeping track of the ever-changing regulations is a difficult and expensive task for drivers and fleets. We at Thermo King have joined with Espar as part of our commitment to help vehicles comply with these regulations and to improve our environment.

Compact Design, Superior Technology

Espar utilizes advanced electronics, such as an electronic speed control, built-in diagnostics and a microprocessor-based controller. Most models are available in 12- or 24-volt versions. No electrical plug-ins are necessary. Espar heaters are lightweight, with models weighing less than seven pounds and are small enough to fit many applications.



Choose the Espar heating system for your application — see your local Thermo King dealer

ON-Highway Applications

Airtronic Air Heaters

Hydronic Coolant Heaters

	Operator Cab & Compartment Heating				Engine Pre-Heating, Cab Heat, Fluid Heating			
	D2*	D4*	D5*	D8LC	D5*	M8/10/12	Hybernator	16 to 35kw
Linehaul Tractors	■	■			■	■	■	
Pickup & Delivery Trucks	■				■		■	
Day Cab Trucks	■				■	■	■	
Dump Trucks	■	■			■	■	■	
Sucker / Vacuum Trucks	■	■			■	■	■	
School Buses		■	■		■	■		
Public Works Equipment	■	■	■		■	■	■	
Snow Plows	■	■			■	■		
Diesel Pickup Trucks	■				■			
Delivery Vans		■	■		■	■	■	
Cargo Heating			■	■				
Transit / Shuttle Bus	■	■	■		■	■		■
Fuel Haulers	■				■	■	■	■
Refuse Trucks	■	■			■	■	■	
Recreational Vehicles		■	■	■	■	■		
Auxiliary Power Units	■	■			■		■	
Police Cars (gas)					■			
Biodiesel Fuel Compatible	■	■	■		■	■	■	

OFF-Highway Applications

Airtronic Air Heaters

Hydronic Coolant Heaters

	Operator Cab & Compartment Heating				Engine Pre-Heating, Cab Heat, Fluid Heating			
	D2*	D4*	D5*	D8LC	D5*	M8/10/12	Hybernator	16 to 35kw
Earthmoving Equipment	■	■	■		■	■	■	■
Forrestry Equipment	■	■			■	■		
Standby Generator Sets					■	■		■
Oilfield Equipment	■	■	■		■	■	■	■
Cranes	■	■			■	■		■
Forklifts					■	■		■
Mobile Workstations	■	■	■	■				
Computer / Training Trailers		■	■					
Bulk Fluids					■	■		■
Aircraft Deicers	■	■			■	■		
Aircraft Moving Equipment	■	■			■	■		
Trailer Spotters	■				■			
Farm Equipment	■	■			■	■		
Marine	■	■	■	■	■	■		■
Biodiesel Fuel Compatible	■	■	■		■	■	■	

Cab and Sleeper Heat

Bunk and Cab Heat

Espar bunk heaters maintain bunk comfort and allow you to shut down your engine. Get a warm, comfortable sleep for just pennies a night!

- Reduce fuel, engine idling and maintenance costs
- Automatic heat regulation through four heat levels
- Low fuel and electrical power consumption
- Self-diagnostics

Espar Kit Options (each kit includes heater)

AIRTRONIC 2 TRUCK KITS

(all kits below include harness, fuel system, ducting, mounting bracket, control option/timer, fuel pickup pipe, hardware kit, exhaust and intake pipes unless otherwise noted)

12 volt with mini-controller	84-837
12 volt with thermostat	84-838
12 volt with digi-controller	84-1731
12 volt with mini-controller (no fuel pickup pipe)	80-110
12 volt with thermostat (no fuel pickup pipe).....	80-111
24 volt with thermostat	84-841

AIRTRONIC 2

12 volt basic heater only	84-843
24 volt basic heater only.....	84-844

AIRTRONIC 4 TRUCK KITS

(all kits below include harness, fuel system, ducting, mounting bracket, control option/timer, fuel pickup pipe, hardware kit, exhaust and intake pipes)

12 volt with mini-controller	84-846
12 volt with thermostat	84-847
12 volt with digi-controller	84-1712

AIRTRONIC 4

12 volt basic heater only	84-849
24 volt basic heater only.....	84-850

Gasoline versions also available.

DIGI-CONTROLLER

- Diagnostic capabilities
- Ambient temperature sensor
- Digital temperature control settings



Engine Heat

Engine Pre-Heat

Ensure startability for drivers who frequently encounter severe cold starting conditions.

- Fast and easy start-up of equipment
- Reduce fuel, engine idling and maintenance costs
- Automatic heat regulation through two heat levels
- Low fuel and electrical power consumption
- No electrical plug-ins
- Self-diagnostics

Espar Kit Options (each kit includes heater)

HYDRONIC D5 SC TRUCK KITS

(All kits below include harness, fuel system, mounting bracket, hardware kit, exhaust and intake pipes. Coolant hose not included.)

12 volt with 7-day timer.....	80-112
12 volt with Internal Fuel Pump	84-1721
12 volt with External Fuel Pump (7-day timer must be purchased separately - 841542)	84-865
Boxed* 12 volt with External Fuel Pump (7-day timer must be purchased separately - 841542)	84-863

If installation is less than 6 feet from fuel tank kits with external fuel pumps are not required.

*Boxed heaters come premounted in a protective box, simplifying installation.

Engine Pre-Heat Models

HYDRONIC®5	(17,000)
HYDRONIC 10.....	(32,400)
HYDRONIC 16.....	(54,630)
HYDRONIC 24.....	(82,000)
HYDRONIC 30.....	(102,000)
HYDRONIC 35	(120,000)

Cargo Heat

Espar heaters warm single and multi-temp trailers and vans, maintaining the desired temperature without using engine power.

- Protect valuable loads from low temperatures
- High volume heat output
- High air flow for even heat distribution
- Electronically controlled temperature regulation

Cargo Heat Application Guidelines

Espar recommends a minimum of 3 inches of insulation on walls and ceiling of cargo area.

AIRTRONIC D4 - Van bodies up to 20' long, maintains 40°F (4°C) cargo temperatures with an outside temperature of -20°F (-29°C)

AIRTRONIC LD5 - Van bodies up to 30' long, maintains 40°F (4°C) cargo temperatures with an outside temperature of -20°F (-29°C)

D8LC - For the most demanding applications

Espar Kit Options

AIRTRONIC D4 - DIESEL

PART#

12 volt basic heater 840849
 12 volt cargo installation kit 840627

(includes harness, fuel system, ducting, cargo bracket, fuel pickup pipe, hardware kit, exhaust with plate and intake pipe - does not include heater)

AIRTRONIC LD5 - DIESEL

12 volt basic heater 841540
 12 volt cargo kit 800208

(includes harness, fuel system, cargo bracket, fuel pickup pipe, hardware kit, exhaust with plate and intake pipe - does not include heater)

D8LC COMPACT HEATER

12 volt basic heater 840889
 (D8LC cargo components must be purchased separately)

Controller Options

Mini Controller 840490
 Thermostat w/ Sensor (12V) 841433
 Rheostat Switch 840703
 7-Day Timer 841545
 External Temperature Sensor 841366

(to locate temperature regulation in cargo box)



E-13

Part Number 80-212

E-13 Cargo Heater Kit Includes:

- Espar D4 diesel fuel operated heater
- 12V wiring to truck battery system
- Fuel pump and hoses
- Install in recirculating or fresh air intake configuration

E-18

Part Number 80-213

E-18 Cargo Heater Kit Includes:

- Espar LD5 diesel fuel operated heater
- 12V wiring to truck battery system
- Fuel pump and hoses
- Install in recirculating or fresh air intake configuration

E-28

Part Number 80-210

E-28 Cargo Heater Kit Includes:

- Espar D8LC diesel fuel operated heater
- 12V wiring to truck battery system
- 110V plug-in connection
- Weatherproof thermostat enclosure
- Painted aluminum enclosure
- Fuel pump and hoses
- Recirculates cargo air for maximum efficiency

E-Guardian Heaters for School Bus Applications

EFFICIENT

- ✓ Reduced idling for lower fuel costs
- ✓ Decreased cold-start engine and parts wear
- ✓ Lowered maintenance time and costs
- ✓ Easily retrofittable
- ✓ Multiple mount options, compact size and low weight
- ✓ Automatic altitude adjustment*

IMPROVED SAFETY

- ✓ Accelerated window defrosting
- ✓ Even heat for a comfortable ride
- ✓ Quick and easy troubleshooting with PC-based diagnostics

ENVIRONMENTALLY CONSCIOUS

- ✓ CARB-approved/EPA SmartWay verified
- ✓ Reduced diesel exhaust emissions
- ✓ Latest environmentally-sensitive technologies

*Standard on the 8, 10, and 12 models and is available as an option on the 5 model.

Specifications

E-Guardian Model	5	8	10	12
Thermo King (Boxed) Part Number (Basic)	841-655 841-707	841-656 N/A	841-657 N/A	841-651 841-708
Voltage (V)	12	12	12	12
Heating Output (Btu/hr)	8,200-17,100	5,120-27,300	5,120-32,420	4,100-40,950
Electrical Consumption (amp)	1.92-4.17	2.67-4.58	2.67-7.17	2.67-11.00
Fuel Consumption (gal/h)	.07-.16	.05-.24	.05-.32	.04-.40
Weight (lbs)	39	68	68	68
Dimensions (inches LxWxH)	12 x 5 x 9	17 X 7.75 X 12.5	17 X 7.75 X 12.5	17 X 7.75 X 12.5

Specifications provided by Espar Heating Systems

Boxed Kits include heater, full installation kit, crash sensor, protective enclosure, mounting tray and digital, programmable timer.

Basic Kits include heater, installation kit and crash sensor.



E-Guardian 5



E-Guardian 12

3-Year Warranty at No Additional Cost

All E-Guardian heaters come standard with an industry-leading 3-year warranty at no additional cost, giving you greater peace of mind and reduced maintenance costs over the longer warranty period.

Specifications provided by Espar Heating Systems



Specifications

Heater	Heat output BTU/hr (KW)	Fuel Consumption (gal/hr)	Electrical consumption (amps)	Air throughput (cfm)	Weight	Dimensions (inches) (LxWxH)
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Airtronic D2



Boost	7,500 (2.2)	0.07	2.7	48	6 lbs (2.7Kg)	12.2x4.5x4.8
High	6,150 (1.8)	0.06	2.0	40		
Medium	4,100 (1.2)	0.04	1.0	27		
Low	2,900 (0.85)	0.03	0.70	19		
Standby			0.40	6		

Airtronic D4



Boost	13,650 (4.0)	0.11	3.3	85	9.9 lbs (4.5 Kg)	14.6x5.5x5.9
High	10,250 (3.0)	0.10	2.0	69		
Medium	6,800 (2.0)	0.07	1.1	50		
Low	3,100 (1.0)	0.03	0.6	27		
Standby			0.40	11		

Airtronic LD5



Boost	18,800 (5.5)	0.17	7.1	137	20.5 lbs (9.3 Kg)	20.9x7.4x7.3
High	16,400 (4.8)	0.15	6.7	135		
Medium	9,200 (2.7)	0.09	2.5	88		
Low	4,100 (1.2)	0.04	1.3	61		

D8LC



High	27,300 (8.0)	0.26	9.6	151	44 lbs (20 Kg)	25x10x9.5
Low	11,900 (3.5)	0.11	9.6	146		

Hydronic 5



Water Throughput

High	17,000 (5.0)	0.16	4.7	238	6.4 lbs (20 Kg)	10x3.5x6.3
Low	8,200 (2.4)	0.07	1.92	146		



Ingersoll Rand's Climate Solutions sector delivers energy-efficient HVACR solutions for customers globally. Its world class brands include Hussmann, a manufacturer of refrigeration and food merchandising solutions, Thermo King, the leader in transport temperature control and Trane, a provider of energy efficient heating, ventilating and air conditioning systems, building and contracting services, parts support and advanced controls for commercial buildings and homes.

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