



# Heat King® 450 Series

Dependable freeze protection for temperature-sensitive cargo



TRANE  
TECHNOLOGIES



## HEAT KING 450 HO AND 450 MAX: MAXIMUM FREEZE PROTECTION DAY IN AND DAY OUT

### HEAT KING FEATURES INCLUDE:

- EPA Tier IV Compliant
- Extra capacity available for longer thin-walled containers or intermodal trailers
- Powerful airflow circulates throughout entire cargo
- DOT-approved for transport of flammable liquids and gases
- High and low speeds for optimal fuel economy

### KEEPING YOUR CARGO SAFE

Heat King keeps your freeze-sensitive cargo safe and warm, no matter how cold it gets outside.

- Paints, chemicals and film
- Pharmaceuticals and cosmetics
- Flowers, plants and fresh produce
- Electronics
- Beverages
- Building materials

The Heat King is the highest capacity dedicated transport heater available in the market today. Heat King delivers maximum uptime, ease of maintenance and long-term reliability with its heavy duty, rugged and simple design. The heart of the unit is a heavy-duty diesel engine which heats coolant that flows to a radiator inside the cargo space, where a high-capacity blower moves the heat throughout, keeping transported products above freezing in the coldest conditions.

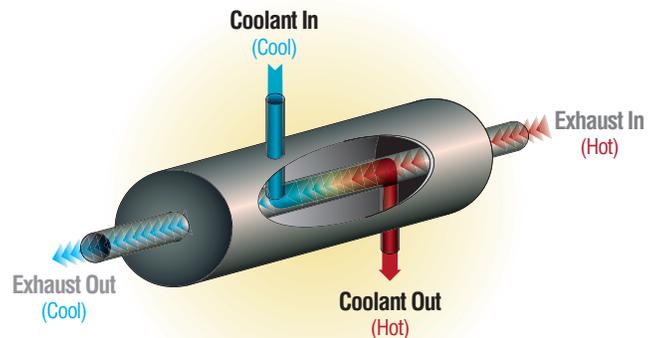
The ThermoGuard® VII controller keeps the unit operating efficiently and reliably. It automatically shuts the unit off when setpoint has been reached with cycle-sentry to achieve maximum fuel economy, and automatically turns it on when it senses heating is required or the battery voltage is low. The TGVII controller also logs alarm codes when faults are detected and is easily reprogrammed through a USB interface.

### HEAT KING 450 MAXIMUM OUTPUT (MAX)

The Heat King 450 MAX utilizes an exhaust heat exchanger that extracts even more heat from the engine, allowing the unit to become 70% efficient in the transfer of energy from diesel fuel to heat. This design produces 33% more heat capacity and transfers heat more efficiently than the closest competitor product.

This additional capacity allows operators to use thinner walled containers and intermodal trailers (which increases the overall payload capacity) and ensures loads are protected from freezing in the coldest climates.

The HO is the quietest in its class with the standard Whisper low noise package, and coupled with its superior heating performance, it stands out above the rest.



## THE THERMOGUARD VII CONTROLLER: MORE FEATURES THAN EVER FOR THE HEAT KING:



- Integrated cycle-sentry feature ensures optimal fuel economy and the battery voltage monitor ensures batteries are charged.
- Flash loadable programming and diagnostics through PC monitor USB interface
- Operational data and alarm codes are automatically logged and can be downloaded via USB
- Optional status light
- Compact design for mounting directly to or recessed into the container
- Includes on/off switch, hour meter and display
- Alarm codes are easily accessed through TGVII display and PC monitor USB interface



# SYSTEM PERFORMANCE

## HEATING CAPACITY

Engine Speed	Btu/hr	Watts	RPM
<b>Heat King 450 HO (High Output)</b>			
High	36,000	10,550	3,050
Low	10,000	2,930	1,550
<b>Heat King 450 MAX (Maximum Output)</b>			
High	50,000	14,650	3,200
Low	10,000	2,930	1,550
Instrumentation is per Thermo King heating test protocol (HeatTesting TKS)			

## AIRFLOW

Engine Speed	CFM	M <sup>3</sup> /hr
<b>Heat King 450 HO</b>		
High	3,400	5,600
Low	1,700	2,800
<b>Heat King 450 MAX</b>		
High	3,600	5,925
Low	1,700	2,800

## OPERATION

Automatic start/stop heating

### STANDARD FEATURES

- TK 2.7 diesel engine
- One-piece unit frame
- Alternator, 37 amp, 12V dc
- Programmable ThermoGuard VII microprocessor controller
- Cycle-sentry start/stop, including battery sentry and block temperature-initiated restart
- Heavy duty battery hold-down and tray
- Remote TGVII display
- Centigrade thermometer
- Installation hardware
- Auto engine restart to charge battery
- Threaded battery post cable

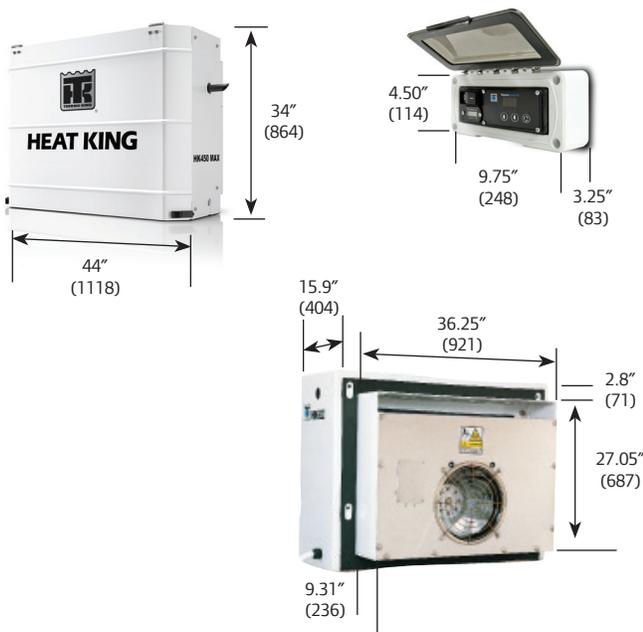
## OPTIONAL FEATURES

- Zero cube unit installation kit
- Silicone coolant hoses
- CE mark
- Low noise package (standard on HO)
- Fuel heater – electric
- Synthetic oil
- Battery cable, clamp post
- Custom paint
- Exhaust extension
- Fuel tanks:
  - 30 gallon (114 liter) undermount aluminum
  - 50 gallon (189 liter) undermount aluminum
  - 50 gallon (189 liter) USFLS ready
  - 110 gallon (416 liter) undermount steel
  - 65 gallon (246 liter) "L"-shape nose mount aluminum
  - 65 gallon (246 liter) rectangular nose mount steel

# SPECIFICATIONS

## DIMENSIONS

Inches (Millimeters)



## WARRANTY

Terms of the Thermo King warranty are available on request. The unit and its components are warranted to be free from defects in material and workmanship from date in service as follows:

- 12 months parts & labor - entire unit including Thermoguard TG-VII microprocessor
- 24 months parts & labor - injection pump, engine and internal parts and radiator coil

Manufacturer is not responsible and will not be held liable in contract or tort (including strict liability and negligence) for any special, indirect or consequential damages including but not limited to injury or damage caused to vehicles, contents or person, by reason of the installation or use of any Thermo King product or its mechanical failure.

## WEIGHT (APPROXIMATE WITH BATTERY)

HK 450 HO.....	448 lbs (203 kg)
HK 450 MAX.....	488 lbs (221 kg)
30 gallon fuel tank with brackets (w/o fuel).....	90 lbs (41 kg)
50 gallon fuel tank with brackets (w/o fuel).....	100 lbs (45 kg)
110 gallon fuel tank with brackets (w/o fuel)....	308 lbs (140 kg)



Thermo King – by Trane Technologies (NYSE: TT), a global climate innovator – is a worldwide leader in sustainable transport temperature control solutions. Thermo King has been providing transport temperature control solutions for a variety of applications, including trailers, truck bodies, buses, air, shipboard containers and railway cars since 1938. For more information, visit [thermoking.com](http://thermoking.com) or [tranetechnologies.com](http://tranetechnologies.com).

