



## SB-310+

*The new benchmark in temperature control continues the SB tradition.*





# Welcome to the new SB-310+

*Introducing the latest chapter in the SB tradition*

**T**oday's trucking environment is a tough one, with rising fuel costs, high operating costs and driver turnover at an all-time high. To help you and your business address these concerns, Thermo King has developed the SB-310+, the latest in a long line of SB reefer units.

The SB line has always set the industry benchmark for quality and reliability, and the new SB-310+ is no exception. With refined fuel-saving technology, an improved driver interface with the new OptiSet™ Plus, the SB-310+ is designed with one goal in mind: to allow you to deliver your load in the best condition and at the lowest cost possible. The SB-310+ continues the most important part of the SB tradition: optimum performance with a lower life-cycle cost.



## Greater Fuel Savings

Fuel costs have reached record levels and are taking a bigger bite out of your budget every day. The SB-310+ was developed to take advantage of the latest fuel-saving technologies, including:

- ✓ Greater Fuel Efficiency means less fuel consumed in all ambient conditions, hauling fresh or frozen
- ✓ ETV (electronic throttling valve) pulls down trailer temperature faster, consuming less fuel to reach the set point
- ✓ Advanced Fuel-Saving Control Technology with the SR-2 Controller means less fuel consumed



## Lower Operating Costs

Reducing the everyday costs of operating the reefer was essential in the development of this new unit. The following features of the SB-310+ will help you realize reduced operating costs, every day you run:

- ✓ SR-2 Controller with OptiSet™ Plus helps ensure correct parameters are set for every load, quickly and easily
- ✓ EMI-3000 means longer service maintenance intervals
- ✓ Low Fuel Warning helps prevent costly out-of-fuel shutdowns
- ✓ Remote Status Displays help eliminate lost loads and keep drivers informed of alarms
- ✓ Scheduled Maintenance Reminder to keep unit running at peak efficiency
- ✓ Improved Warranty (4 year/8,000 hour major component coverage. See Thermo King dealer for details.)




## Increased Driver Retention

Finding and training new drivers is a costly burden on your business, so the SB-310+ comes with several features designed to help retain your valued drivers:

- ✓ SR-2 Controller is easy to use and covers 21 languages
- ✓ OptiSet™ Plus makes it simple to set the correct temperature profile settings for over 500 fresh and frozen items
- ✓ Whisper™ Low Noise Technology improves driver comfort by cutting noise levels significantly

*Thermo King is  
the Green Leader*

Thermo King offers industry-leading products and solutions that enable businesses around the world to reduce energy consumption and costs and decrease harmful environmental emissions.

The  symbol indicates a feature that delivers a significant environmental advantage over previous models or the competition.



SB-310+: Delivering Environmental Benefits while

# Saving You Money



## Certified by the EPA

The TK486V engine from the SB-310+ exceeds EPA Interim Tier 4 requirements for NO<sub>x</sub> and particulate matter emissions.

	HC + NO <sub>x</sub> (g/kW-hr)	Particulate Matter (g/kW-hr)
EPA Interim Tier 4 Standard	7.5	0.30
TK486V Engine	6.1	0.21
<b>Thermo King Exceeds the Standard by</b>	<b>19%</b>	<b>30%</b>

For more information, go to <http://www.epa.gov/otaq/certdata.htm>



## Reduce maintenance costs and waste with EMI-3000

*extended maintenance interval*

- Reduces clean up and disposal costs
- Reduces environmental impact with less spillage and less waste
- Extends engine life
- Lower maintenance costs than competitive models

# The SR-2 Controller Easy to use. Hard to beat.

Powerful and simple to use, the SR-2 controller makes it easy for your drivers to accurately manage the temperature in the trailer, no matter what you're hauling. Step-by-step instructions, written in simple text, make precisely setting and adjusting the reefer quick and easy, helping your drivers, your customers and, ultimately, your bottom line.



## Fuel Savings

The SR-2 features several improved fuel-saving features:

- CYCLE-SENTRY mode
- CYCLE-SENTRY Modulation mode
- Economy mode
- Electronic door switch input

## Improved Diagnosing

Better diagnostics make it easier for drivers to understand and respond to potential problems, the first line of defense in transport refrigeration.

- Comprehensive listing of alarm codes with text descriptions
- Customer-selectable alarms
- Service test mode

## Language Selection

Drivers can choose from 21 languages with a multi-lingual text menu.

## CargoWatch™

Provides temperature and system data for HACCP plan. From the time cargo is loaded to its final destination, the SR-2 logs the trip history with all essential information necessary to maintain your HACCP plan. CargoWatch options include:

- 6 temperature sensors/probes
- 4 door switches
- Data averaging
- Programmable, temperature out-of-range alarms

## CYCLE-SENTRY™ Modulation

Combines the benefits of continuous run and our CYCLE-SENTRY fuel saving feature for optimum efficiency with certain types of cargo in fresh temperature ranges.

## Enhanced Safety and Security

At the end of the day, protecting your load is what it's all about. The SR-2 was designed to make that job easier and even more effective with:

- Keypad with lock-out
- Mode-lock
- Phase-correction
- Diesel/electric auto switching
- Setpoint warning
- Return or discharge air control (with ETV)

## Enhanced FreshSet™

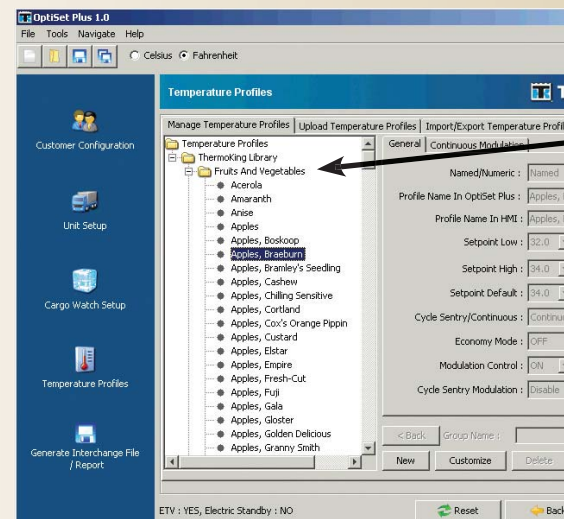
Provides the tool to optimize protection of fresh loads and eliminate worries. Combined with the Electronic Throttling Valve (ETV), this system provides optimum unit capacity over the full range of ambient and cargo temperatures.

## Now with the new OptiSet™ Plus

Your refrigeration units have the flexibility and capacity to handle a wide range of cargo types and operating conditions, but knowing the proper control settings for each load can be a daunting task.

Thermo King developed OptiSet Plus to meet this challenge, and to make the goal of optimized unit performance and cargo protection simple.

Standard on the SB-310+, OptiSet Plus is an interface for the SR-2 controller. It's ease of use helps reduce shipper and driver errors and maximize shelf life for fresh and frozen commodities. OptiSet Plus' commodity profiles, developed with food and agriculture industry experts, generate an exact profile setting no matter what you're hauling. Bottom line: You want your load delivered in optimum condition, and OptiSet Plus helps you deliver.





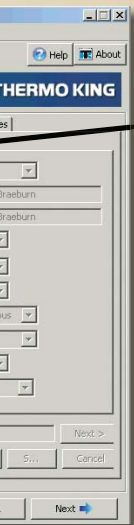
Choose from nearly 500 commodity profiles with OptiSet™ Plus.

System capacity automatically adjusts to the requirements of the load, yielding tighter temperature management and reduced risk of top freezing.

**ServiceWatch™**

This preventative maintenance device combines a precise built-in recorder with improved diagnostics. It keeps track of system performance and functionality, recording all operational parameters to significantly improve service diagnostics. Monitors:

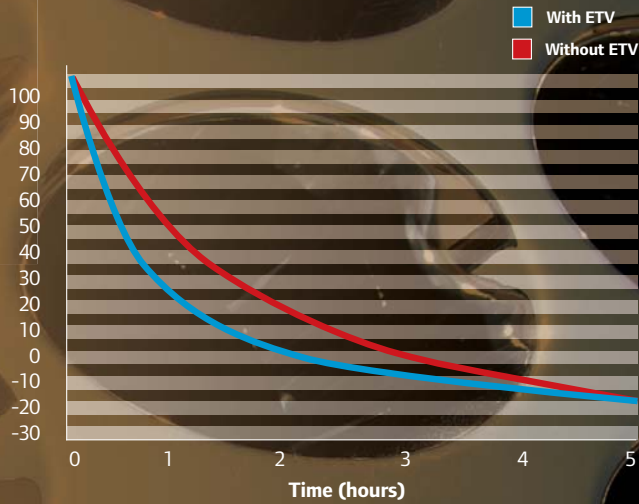
- All control settings
- System control sensors
- Alarms
- System operating modes
- Defrost intervals



Set up as many as 64 profiles per unit.

# Save time and and fuel with ETV

ETV (electronic throttling valve) gets your trailer to the right temperature faster.



**ETV: The fastest pull down (and pull up) in the industry**

## Improve driver comfort with Enhanced Whisper™ Low Noise Technology

Thermo King's exclusive Whisper technology, which is now quieter than on previous models, provides you with another tool to reduce noise pollution, increase driver retention and comply with noise ordinances.





# SB-310+

## Features & Options

### Standard Features

- SMART REEFER SR-2 controller
- OptiSet™ Plus with FreshSet™
- Electronic throttling valve (ETV)
- ServiceWatch™
- EMI-3000
- CargoWatch™
- CYCLE-SENTRY modulation
- High-capacity condenser coil
- Easy-access door design
- Composite exterior panels
- Long-life coolant/silicone hoses
- Standard unit color white
- Standard grille color black
- Directional air delivery
- Vibration isolation system
- Aluminum undermount
  - fuel tank 50 gal. (186 liter)
- Fuel level sensor

### Options (Factory)

- SmartPower electric standby
- Whisper™ quiet technology
- Remote status display
- Fuel heater
- Frost plug heater
- Alternator, 65 amp, 12V dc
- Special color grilles
- Fresh air exchange
- i-Box™ interface
- CargoWatch™ Accessories:
  - Electronic door switches
  - Temperature sensor kits

### Options (Dealer)

- i-Box™ interface
- PrimAir™ bulkhead and duct system
- CargoWatch™ Accessories:
  - Electronic Door switches
  - Temperature sensor kits
  - Humidity sensor kits
  - EON battery
  - Remote status display w/fuel
  - Remote status display w/fuel & temp

## Popular Options

### EON battery

- Full-replacement 4-year warranty
- AGM technology for greater efficiency, longer life and a lower life cycle cost



### Remote Status Display

- Displays check alarm codes and shutdown alarms
- Available as a factory option on the SB-310+



## Expert Service and Support are as close as this sign.

Enjoy the support of the Thermo King Dealer Network.

Over 200 factory-authorized service centers nationwide—  
**find one nearby at [www.thermoking.com](http://www.thermoking.com)**



# System Performance

## Description

Microprocessor-controlled, high-capacity, frontmount, diesel-powered temperature control unit with directional air delivery for today's jumbo trailers.

## Model available

### SB-310+

Cooling and heating on engine operation using R-404A refrigerant

## Operation

- SR-2 Controller
- OptiSet™ Plus with available FreshSet™ programmable modes
- Continuous run/Cycle-Sentry™
- Automatic defrost initiation
- Programmable defrost timer
- CargoWatch™ data meets HACCP and NIST standards.

## Compressor

- Model X430L
- 30.0 cu in (491.6 cm<sup>3</sup>) displacement
- High strength forged crankshaft
- Lightweight, aluminum alloy body, heads and sump
- Replaceable cylinder liners
- Vanasil® ringless pistons
- Gerotor oil pump

## Engine

- TK486V direct-injection diesel engine
- Four cylinder, liquid cooled
- API classified CI mineral oil after break-in
- 15 qt (14.2 liter) oil capacity
- 34.0 hp rating operating at 2200 rpm
- 3000 hour maintenance intervals
- Meets EPA emissions requirements for Interim Tier 4

## Air flow

3,500 CFM @ 0 in static pressure  
3,200 CFM @ 0.5 in static pressure

## Refrigeration Capacity

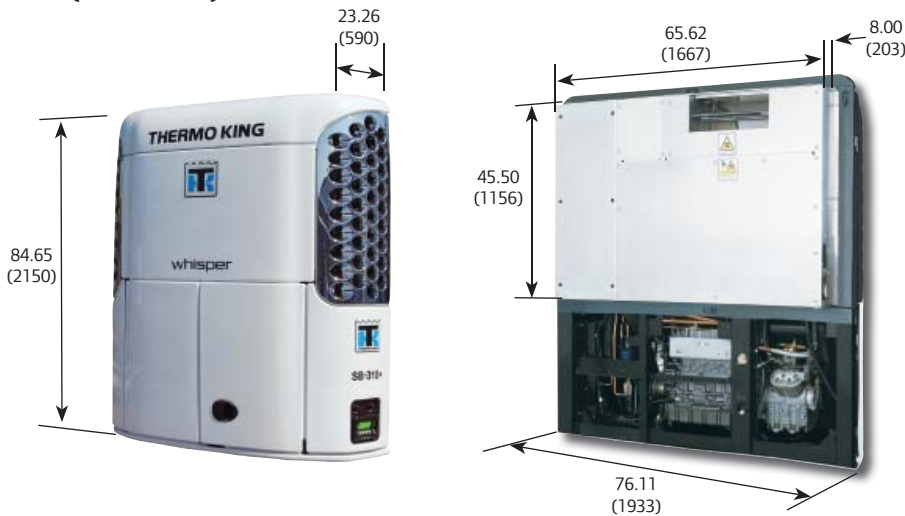
System net cooling capacity at 100°F (38°C) ambient and high-speed engine operation.

Evaporator Degrees F	Return air Degrees C	Engine Power	
		Btu/hr	Watts
35°F	1.7°C	64,000	18,756
0°F	-17.8°C	37,000	10,843
-20°F	-28.9°C	25,000	7,327

# Specifications

## Dimensions

Inches (Millimeters)



## Weight

Inches (Millimeters)

**SB-310+**  
1635 lbs (742 kg)

**Fuel tank, 50 gallon**  
35 lbs (16 kg)

## Warranty

Terms of the Thermo King Warranty are available on request from your local Thermo King dealer.

Available  
Thermo Gard™  
**Service  
Programs**



### Silver

#### Centralized Billing

Billing made easy to save you time and money.

### Gold

#### Extended Warranty

Flexible configurations that can be designed to meet your specific business requirements.

### Platinum

#### Guaranteed Maintenance

A comprehensive service plan designed to lower costs and increase uptime.

Photos may show optional equipment. See your dealer for more information.



Providing equipment and services to manage controlled-temperature environments for food and other temperature-sensitive products, our Climate Control Technologies sector encompasses both transport and stationary refrigeration solutions. Our product brands include Thermo King®, a world leader in transport temperature control systems, and Hussmann®, a manufacturer of refrigeration and food merchandising equipment.

[www.thermoking.com](http://www.thermoking.com)   [www.hussmann.com](http://www.hussmann.com)   [www.ingersollrand.com](http://www.ingersollrand.com)

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