

# UT XTREME<sup>HIGH</sup> AMBIENT

— efficiency, reliability and durability —

SINGLE TEMPERATURE SELF-POWERED REFRIGERATION SYSTEM  
FOR TRUCK AND HIGHLOADER UNDERMOUNT APPLICATIONS AT  
EXTREME AMBIENTS.

# UT XTREME<sup>HIGH</sup> AMBIENT

## Designed for the highest ambients

The proven Thermo King UT range now has a new high-performance addition. Specifically developed and extensively tested for the most demanding high ambient conditions, the UT XTREME<sup>HIGH</sup> Ambient provides total protection for sensitive fresh goods. In addition, you get a unit with proven reliability, low operating and maintenance costs and low emissions. Once again Thermo King has set the industry benchmark for reliability, performance and efficiency.

### Benefits to you

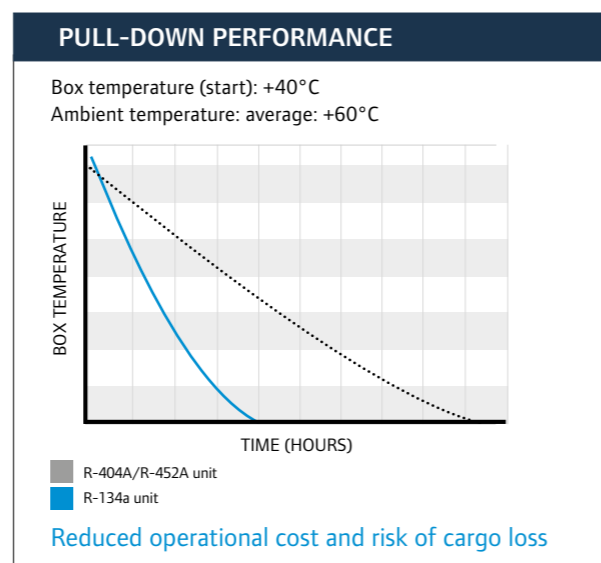
- Benchmark reliability in the high ambient environments
- Proven fresh performance at up to 55°C and beyond
- Faster full-down and temperature recovery
- Full two-year warranty
- Market leading service and accessibility
- Easy, low-cost installation
- Advanced TSR-3 controller
- Low fuel consumption

### Benefits for the environment

- R-134a refrigerant delivering positive environmental impact increased over 60% with reduced GWP (Global Warming Potential)
- Low fuel consumption
- Low engine emissions with GreenTech™ engine
- Reduced R-134a refrigerant charge
- Whisper-quiet operation

### Fastest temperature pull-down

- Fast, efficient temperature pull-down under extreme high ambient due to R-134a refrigerant
- Sensitive loads are better protected against temperature rise during delivery cycles
- Low fuel consumption



## Why choose the UT XTREME<sup>HIGH</sup> Ambient?

Purpose-designed for the highest ambients:

- Proven to protect fresh loads up to 55°C and beyond ambient using R-134a refrigerant
- Faster pull-down to avoid cargo damage during door openings
- Proven reliability during thousands of field-trial hours in the harshest conditions
- Low operating pressures to extend unit life

### Lower fuel consumption

- Through extensive development and field experience, Thermo King have found the right balance between system efficiency, fuel consumption and performance
- Advanced fuel-saving control technology with the TSR-3 controller means greater fuel efficiency
- An innovative microchannel condenser coil helps to reduce fuel consumption by over 10% compared to a conventional tube and fin condenser coil

### Lower life cycle costs

- The TSR-3 controller allows optimum management of all functions within the unit, helping you to lower costs with each load
- The extended maintenance interval EMI 2000, means that there is now up to 2000 hour intervals between engine oil and filter changes. This will help to lower maintenance costs significantly
- A 19cm reduction in length and a 20kg reduction in weight results in reduced vehicle weight, increased vehicle payload and further fuel efficiency
- The UT XTREME<sup>HIGH</sup> Ambient comes with a full 2-year warranty

### Easy to use and service

- The TSR-3 controller, means error free operation is now simpler than ever. By simply using the symbolic display, errors can become a thing of the past
- Low level alerts for oil and coolant
- Easily programmable service intervals and scheduled maintenance reminders
- Easy service accessibility to electrical and engine components

### Reduced emissions & waste

- With the GreenTech™ engine you can be assured that the UT XTREME<sup>HIGH</sup> Ambient is playing its part in keeping the environment safe. These engines are by far the cleanest on the market, significantly exceeding all EU requirements
- 99.7% of the unit material is recyclable
- The UT XTREME<sup>HIGH</sup> Ambient range is manufactured at Thermo King's state-of-the-art facility in Galway, Ireland, which has held ISO 14001 certification for Environmental Management since 2000



**Faster pull-down and recovery**  
**Proven fresh performance at up to 55°C and beyond**  
**Low fuel consumption**

## Quality you can rely on

Number one for efficiency, reliability and durability – The UT XTREME<sup>HIGH</sup> Ambient from Thermo King was born from years of extensive research, testing and experience; imitated by many, perfected only by Thermo King.

At every stage of the development, the UT XTREME<sup>HIGH</sup> Ambient units have undergone rigorous testing procedures in cutting-edge R&D centres worldwide. This includes nonstop endurance tests, accelerated life tests and exposure to extreme operating environments. All of these measures ensure that you can rely on your UT XTREME<sup>HIGH</sup> Ambient unit for any type of application, in all conditions, without compromise.

### State of the art GreenTech™ engine

- Low emissions
- High performance
- Increased lifespan
- Reduced maintenance

### Maximum Operating Uptime

- Easy maintenance to ensure optimized operation for life time of the UT XTREME<sup>HIGH</sup> Ambient
- Lower maintenance costs versus competitor models
- Genuine TK Service Parts designed and tested specifically for the extreme demands of transport temperature control application

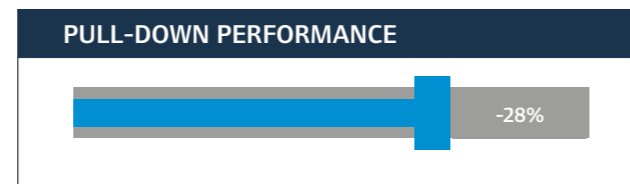
### Condenser coils

- A larger condenser enables high temperature capability, further capacity and more efficiency, all with whisper-quiet operation
- The all new microchannel condenser coils provide a number of additional performance benefits which will ensure operating profits and reliability are enhanced  
These features include:
  - Reduced fuel consumption
  - Reduced engine and compressor temperatures
  - Reduced refrigerant charge
  - Reduced weight
  - Increased recyclability

## Scroll compressor

### Technological advantages

- High efficiency means high capacity
- Greater capacity means faster pulldown and temperature recovery
- 87% fewer moving parts means high reliability and longer life
- Lower fuel consumption means more operating profit
- The scroll set to optimise the high ambient performance is cooled through liquid injection



### Corrosion prevention

Due to the extreme environments in which the UT XTREME<sup>HIGH</sup> Ambient will operate, corrosion prevention was a key priority in the designing of these units. Some of these world-class leading features include:

- An automotive grade electrocoated (e-coated) frame
- An all aluminum microchannel coil to eliminate galvanic corrosion
- Extensive use of painted aluminum and galvanised steel for skins and other components

### Environmental advantages

- Less fuel required means less fuel consumed
- Less fuel consumed means lower diesel emissions
- Whisper-quiet operation means lower noise emissions
- Chlorine-free R-134a means zero ozone depletion

## The TSR-3 controller, easy to use, hard to beat!

Install confidence amongst your fleet and your drivers with the easy to use TSR-3 controller and display for the UT XTREME<sup>HIGH</sup> Ambient units. This innovative symbolic controller means your drivers can adjust and set the refrigeration unit with ease. Eliminate all doubt with the step-by-step easy to use interfaces.

### Intuitive interface

Make operator errors a thing of the past with the TSR-3 in-cab display. This easy to use interface is the perfect solution, regardless of what language you speak. All information is displayed with easy to understand symbols and is effortless to navigate. For those who need that little bit extra, the graphic TSR-3 Premium in-cab display is also available. With 21 languages it is easy to navigate and to use, it couldn't be simpler!

### Fuel savings

The TSR-3 controller includes features that improve fuel savings such as:

- Cycle-Sentry™ mode
- Economy mode
- Electronic door switch input

### Improved diagnostics with ServiceWatch™

Clearer diagnostics with ServiceWatch™ make it a pleasure to use for service technicians. Potential problems become easier to understand and response times are shortened significantly. The built-in preventative maintenance logger is a recorder that provides improved diagnostics and keeps track of all system performance and functionality. By recording all operational parameters, service diagnostics are significantly improved, ensuring service technicians have reliable and valuable information to hand at all times.

### Easy-to-read LED display

The LED display is bright and clear, providing better visibility in all light conditions. It also functions perfectly in all ambient temperatures.

### Enhanced safety and security

At Thermo King, we understand the importance of transportation and protection of your consignment. With the TSR-3 controller on board, you can avail of the enhanced features that will ensure the safe passage of your goods:

- Keypad with lock-out
- Phase correction
- Diesel/electric auto switching
- Set-point warning
- Oil and coolant level alerts
- Tiered security access levels for appropriate personnel
- Diesel engine and electric standby hour meter display

DAS (Data Acquisition System) and TracKing™ compatibility



TSR-3 Standard in-cab display



TSR-3 Premium in-cab display

# The GreenTech™ Engine from Thermo King

## Low emissions, high performance

The UT XTREME<sup>HIGH</sup> Ambient is equipped with the class-leading range of GreenTech™ engines from Thermo King. These engines drastically reduce emissions, waste, and noise pollution, exceeding all known requirements, including the most stringent EU standards.

When you see the GreenTech™ name and symbol, you know at a glance that you are looking at refrigeration units that contain the cleanest engines on the market today. Performance has also been enhanced; GreenTech™ engines are more powerful and cause less stress to components. It is the easy choice for you and the best choice for the environment.

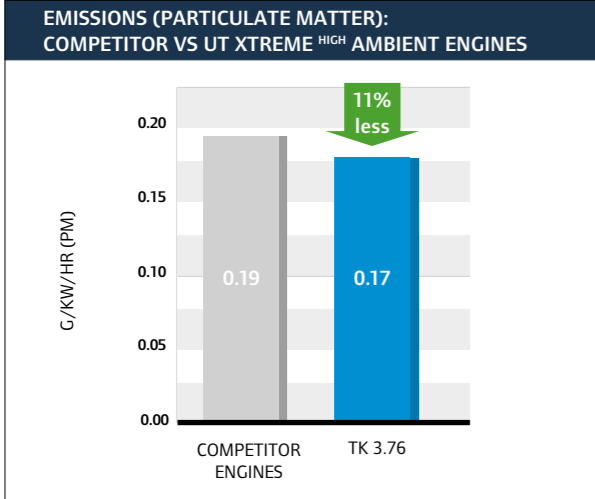
### Engine life

The engine used for the UT XTREME<sup>HIGH</sup> Ambient is more powerful than any other on the market, even running at no more than 80% of its maximum output. This means, both oil and coolant temperatures are reduced greatly, resulting in less component stress and engine wear.

Longer engine life = higher savings.

### Bio-fuel compatibility

The GreenTech™ engines are approved for use with B5 fuel (5% bio/95% petroleum diesel) with no change in maintenance schedules. Fuels with higher bio-diesel content (B6 up to B100) require shorter intervals between oil changes and injector servicing. Contact your Thermo King representative for more information.



# Whisper-quiet operation

In times where noise pollution is a growing concern, Whisper-quiet operation has never been more important. Those of you distributing to urban and noise sensitive areas will be familiar with demands for noise reduction.

The UT XTREME<sup>HIGH</sup> Ambient was developed to minimise operating noise. Not only did we design effective containment but also focused on reducing noise generation at source. As a result, many components were redesigned to minimise noise while maintaining functionality and durability.

### Quieter operation

The belt drive system and fan are positioned at the back of the unit, resulting in a significant decrease in noise levels over other layouts trialled. This, combined with sound-abating technology around critical components, make the UT XTREME<sup>HIGH</sup> Ambient substantially quieter than any competitor systems.



# Features and Options

## ThermoKare

ThermoKare offers a comprehensive range of service contract options, helping to manage your maintenance costs and the total life cost of your unit.

## Warranty coverage

2-year warranty coverage on unit and options



## Cycle-Sentry

This feature stops the engine when refrigeration is not needed and restarts it when refrigeration or battery charge is required

- Fuel and CO<sub>2</sub> savings of up to 80%
- Increased component life
- Reduced maintenance costs

## Thermo King high performance battery

- Incorporates silver-calcium technology to extend service life to over 20% more than conventional batteries

## Thermo King EON battery 880CCA

- Uses Absorbed Glass Mat (AGM) technology with deep-cycle capability and enormous cranking power
- Saves you the time and money of battery replacements through an expected five to eight year service life also backed by our 2-year warranty

## DAS (Data Acquisition System)

This high performance data recorder system records temperatures, set-point, operating modes and external events. An invaluable option for your unit.

- Data can be output to a computer or a printer
- Operates independently of unit controller
- Memory storage for over one year's worth of data
- Assures customer of total quality control
- Provides evidence of correct practice
- Approved to EN-12830, CE mark and IP-65 standards
- Up to 6 independent sensors
- Automatic power-up and shut-off to protect unit battery

## TracKing

Complete load monitoring and fleet tracking at your fingertips.

- Monitors sensitive loads via the web, increases truck asset utilisation, reduces operating costs, enhances customer satisfaction, increases security and reduces insurance risk. TracKing can be sold with a ThermoKare service contract. TracKing is compatible with all Thermo King dataloggers and controllers



- More information at [www.tktracking.com](http://www.tktracking.com)

## Wintrac (data analysis software)

User-friendly software offers fleet managers automatic and customised reporting of temperature and operational data, logged by DAS or transmitted by TracKing.

## Auto phase correction

- Avoids reverse fan rotation while on electric standby
- Protects your load

## Diesel/electric auto switching

- Automatically starts diesel engine if electric standby fails
- Manual override for ferry operation
- Protects the load automatically (without manual intervention)

## TouchPrint Data Logger

Compact, easy to use data logger with high speed printer. Modular design fits radio DIN slot in cab or IP 65 box for external use.

- Reads and records temperature and set point on Thermo King units
- Exports tickets to USB flash drive
- Compatible with TracKing and Wintrac
- EN 12830, E type and WELMEC 7.2 approved.

## SafeGuard Battery Kit

Monitors battery voltage and automatically disconnects battery if low voltage occurs. Prevents any auxiliary devices draining the battery ensuring unit can always be restarted.

- Extends battery life
- Avoids call outs and down time.

## Electronic Fuel Capture

Fuel level sensors that are compatible with all Thermo King and some competitor tanks. Enable information to be visualized on unit controller or a combo display or web enabled for remote monitoring via TracKing.

## Remote Status Light and Combo Display

Combo Displays increase driver awareness, enabling early corrective action and reducing the risk of load loss.

- 3 in 1 display (unit status, fuel level and load temperature)
- Excellent visibility with auto-dimming for day and night operation
- Can display fuel level in Thermo King tanks.

## Door switches

- Reduces the load temperature rise and saves fuel when doors are opened

## TSR-3 standard in-cab display

- Simplified keypad to reduce the risk of incorrect operation of the system, cutting down on errors
- Visible set-point confirmation for load protection
- Programmable features allow tailoring of operating conditions to each load

## TSR-3 premium in-cab display

- Enables greater control of every aspect of a UT XTREME<sup>HIGH</sup> Ambient unit
- Allows access to all programmable features on the TSR-3 controller
- Simple and logical menus, easy to read screen and choice of 21 languages

## TherMax system

- Faster defrosts

## Evaporator guard

- Maximum protection against evaporator damage during loading and unloading
- Easy to install
- Exceptional quality

## TSR-3 rear remote control

- Allows easy control of the refrigeration unit from inside the rear of the truck
- Enables energy efficient and safe loading

## Body mount enclosure

Allows external mounting of in-cab displays on drawbar truck bodies, allowing for easy access

## 90L Fuel tank

- Approved for diesel and bio-diesel
- Vibration resistant as per Thermo King standards
- Mechanical fuel gauge with option to upgrade to electrical
- Galvanised drain plug as standard
- Corrosion resistant installation kit (e-coated)

## Tough, leak resistant flexible hoses

- Highest quality
- Designed to reduce installation time
- Ideal for 'scissor-lift' applications for the airline catering industry
- Robust design proven with extensive field trials and thousands of running hours

LIFE COST MANAGEMENT	
ThermoKare service contracts	▲
2-year warranty coverage	●
Cycle-Sentry start/stop control system	●
Thermo King high performance battery	●
Thermo King battery wet cell 760CCA	△
Thermo King battery EON 880CCA	△
DATA CAPTURE & COMMUNICATIONS	
DAS (Data Acquisition System)	▲
FleetWatch (fleet management software)	▲
TouchPrint Data Logger	▲
TracKing (tracking and load monitoring)	▲
Wintrac (data analysis software)	▲
LOAD PROTECTION	
Auto phase correction	●
Diesel/electric auto switching	●
Door switches	△
TSR-3 standard in-cab display	●
CUSTOMIZATION	
TSR-3 premium in-cab display	△
TherMax system	●
Evaporator guard	▲
TSR-3 rear remote control	△
Body mount enclosure	△
90L Fuel tank	▲
Flexible hoses	▲
Electronic Fuel Capture	▲
Remote Status Light and Combination Display	▲

- Not available
- Standard feature
- △ Option: factory supplied
- ▲ Option: dealer supplied

### Exclusive driver training software

Avail of Thermo King's Tutor Series with "Professor Kool™". This software provides rapid and effective interactive training to reduce driver error and will ensure you get the best results from the operation of your equipment.

# Specifications

SPECIFICATIONS		UT XTREME <sup>HIGH</sup> AMBIENT HIGH AMBIENT E-EVAP CONFIGURATION		UT XTREME <sup>HIGH</sup> AMBIENT HIGH AMBIENT S3+S3 CONFIGURATION	
<b>REFRIGERATION CAPACITY: SYSTEM NET COOLING CAPACITY AT 55°C AMBIENT TEMPERATURE</b>					
<b>Return air to evaporator</b>	<b>Celsius</b>	<b>0°C</b>	<b>20°C</b>	<b>0°C</b>	<b>20°C</b>
Capacity on engine power	W	6 700	11 500	6 700	11 500
Capacity on electric stand-by	W	5 000	8 500	5 000	8 500
<b>REFRIGERATION CAPACITY: SYSTEM NET COOLING CAPACITY AT 30°C AMBIENT TEMPERATURE</b>					
<b>Return air to evaporator</b>	<b>Celsius</b>	<b>0°C</b>		<b>0°C</b>	
Capacity on engine power	W	7 500		7 500	
Capacity on electric stand-by	W	6 000		6 000	
<b>AIRFLOW ON HIGH SPEED ENGINE OPERATION</b>					
Airflow volume @ 0 Pa static pressure (discharge velocity)	m <sup>3</sup> /hr	3350		3960	
	m/s	6.6		9.3	
<b>WEIGHT: EXCLUDING BATTERY</b>					
TOT unit + evaporator(s)	kg	580		597	
<b>ENGINE: LOW EMISSIONS, 2 CYLINDER, LIQUID COOLED</b>					
Model		TK 376		TK 376	
Rating	kW	14.6 kW		14.6 kW	
Maintenance Interval	hrs	2 000 hrs		2 000 hrs	
<b>COMPRESSOR: LIGHTWEIGHT ALUMINIUM ALLOY</b>					
Model		TK06		TK06	
Displacement	cc	98 cc		98 cc	
<b>ELECTRIC STAND-BY OPTION</b>					
Voltage / Phase / Frequency	kg	230V / 3Ph / 60Hz & 400V / 3Ph / 50Hz		230V / 3Ph / 60Hz & 400V / 3Ph / 50Hz	
Rating	kW	7.5 kW		7.5 kW	

Specifications are subject to change without notice. Airflow volume and weight will be cumulative. Capacity will depend on unit configuration.



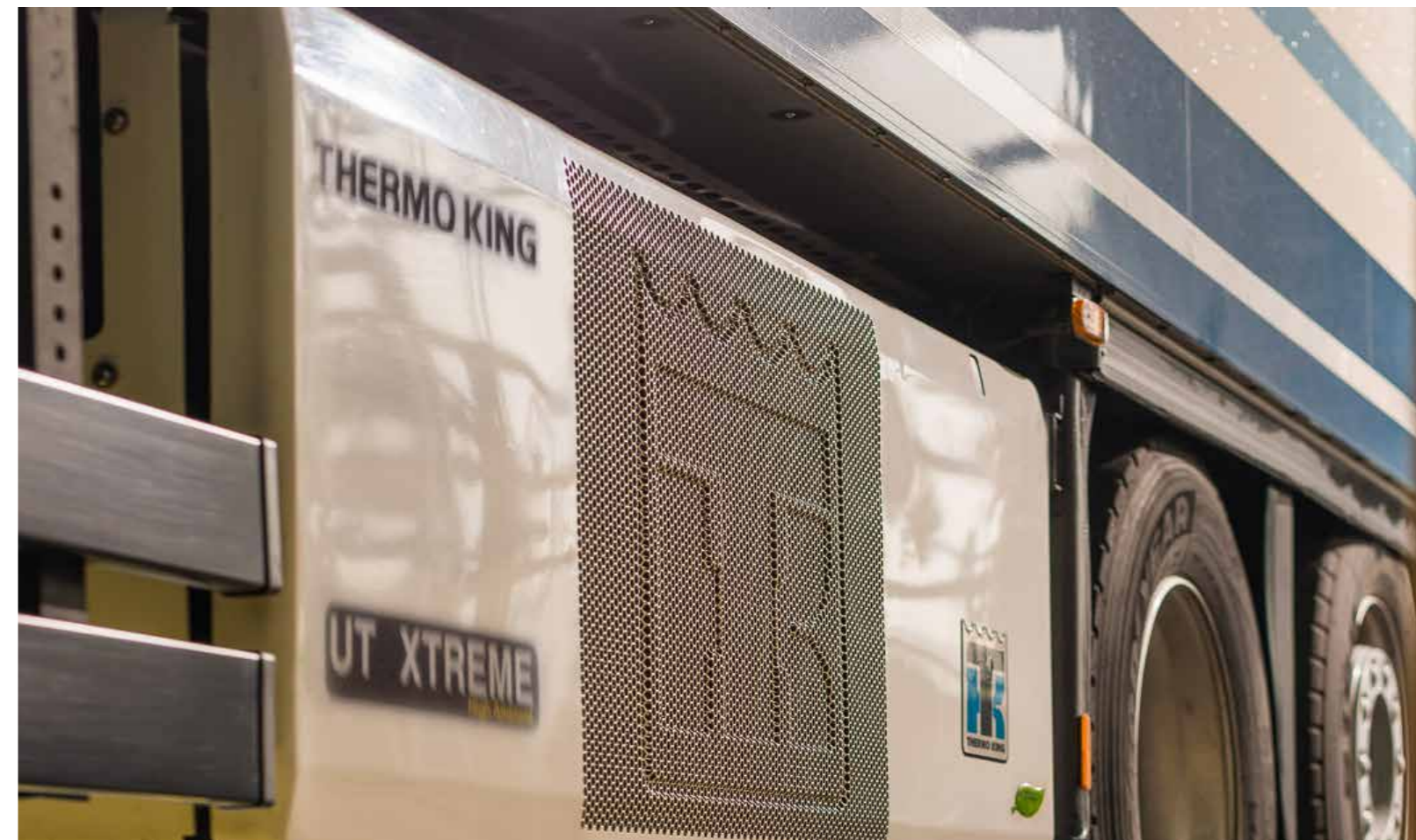
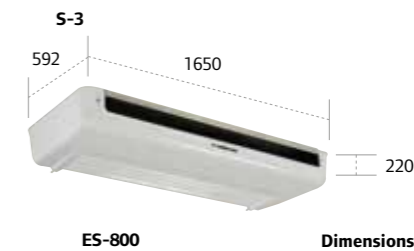
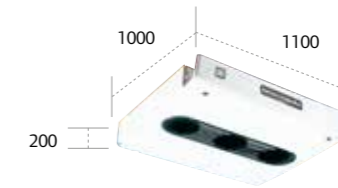
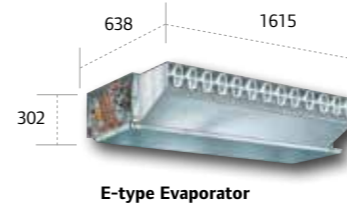
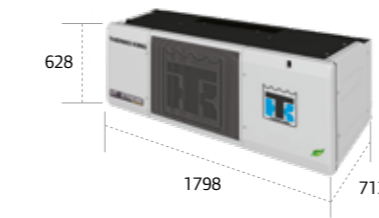
## WARRANTY CONDITIONS

Thermo King warrants the new product delivered will be free of defects in material and workmanship for the period of time specified in the applicable warranties. Specific terms of the Thermo King warranty are available on request.

# Product segmentation



\*The above recommendations are for average running conditions and will be affected by operational factors such as climate temperature and door openings. To ensure the best selection for your application please contact your Thermo King representative.





## THERMO KING

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 further information, please contact:

[europe.thermoking.com](https://europe.thermoking.com)

Find your nearest dealer on

[dealers.thermoking.com](https://dealers.thermoking.com)

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