

# UT-SERIES

— versatility, efficiency, and durability —



SINGLE AND MULTI-TEMPERATURE SELF-POWERED  
REFRIGERATION SYSTEMS FOR UNDERMOUNT APPLICATIONS  
ON TRUCKS AND DRAW-BAR TRAILERS

# Introducing the new UT-Series

**THE UT-SERIES TAKES  
UNDERMOUNT REFRIGERATION  
TO A NEW LEVEL.**

Developed for multiple applications, from inner city and city-to-city distribution to pharmaceutical transport and airport catering, the UT-Series is the most powerful refrigeration system in its category as well as being small and highly efficient. Its advanced technology delivers the performance you need, while lowering costs, noise, and emissions.

Discover the benefits of UT-Series refrigeration units for your trucks and draw-bar trailers.



## CONTENT

UT-Series	2
Innovative refrigeration	4
The right refrigeration solution for your application	6
Meeting your refrigeration needs, exceeding your expectations	10
Features and options to enhance your refrigeration solution	18
Specifications	22

# Innovative refrigeration.

Every aspect of the UT-Series has been developed with you, your driver, and your operations in mind.

## OPTIMIZED UPTIME AND CARGO SAFETY

The **highest cooling capacity in the market** allows for a much quicker time to reach the set-point and recover temperature after opening the door (see page 10).

## QUIETER OPERATIONS, DAY AND NIGHT

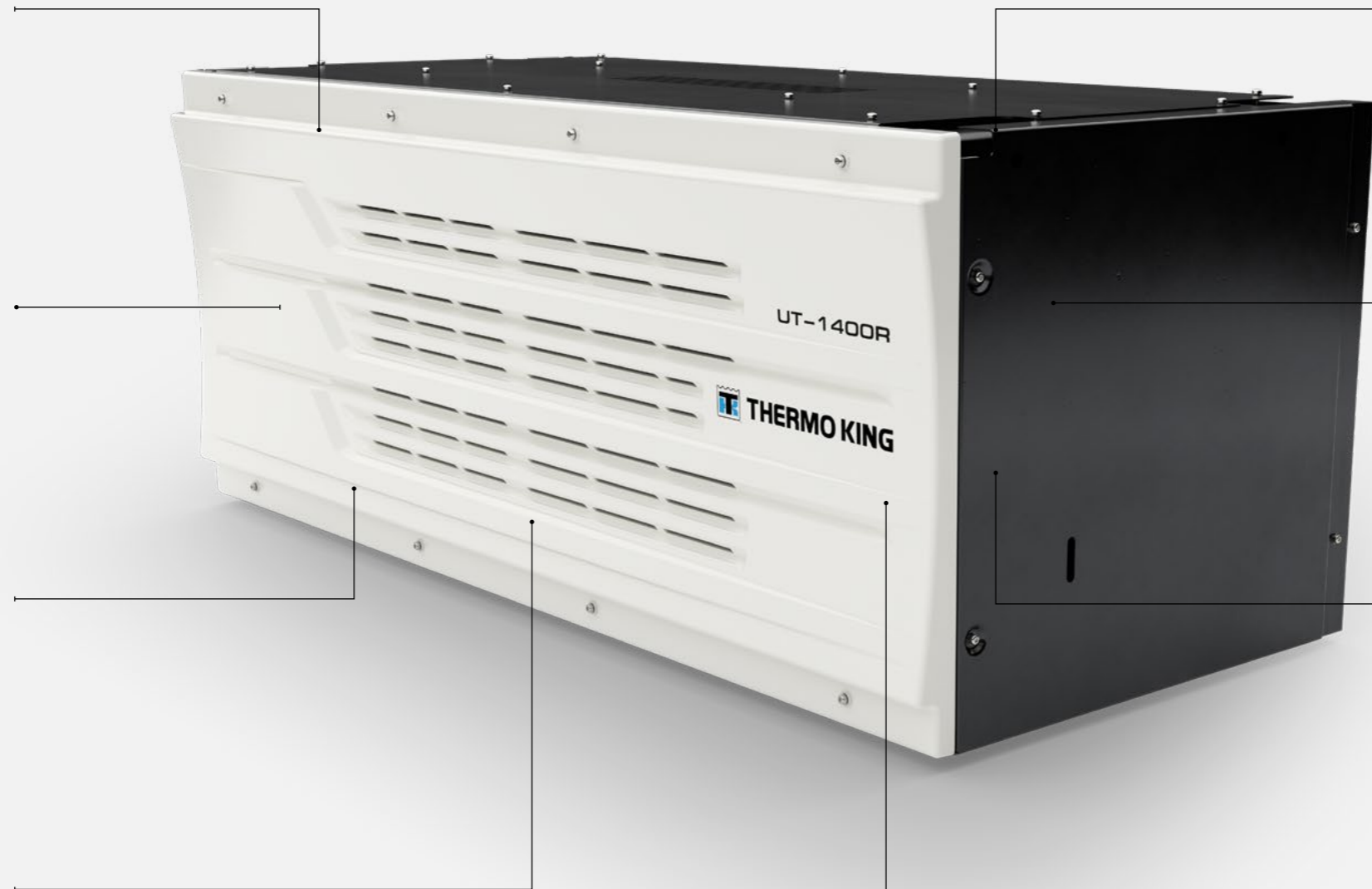
**Reducing noise and vibrations** improves the perception of your operations on your local community and the well-being of your drivers (see page 10).

## MORE TIME ON THE ROAD

Thermo King's best-in-class compressor and new enclosure design dramatically **reduces the risk of breakdown** and makes the unit much **easier to service**.

## FRIENDLY TO YOUR WALLET AND THE ENVIRONMENT

The unit's **minimized fuel consumption and compatibility with biofuels** help you to reduce the carbon footprint of your fleet while reducing the overall cost of your operations (see page 14).



## SPACE SAVING DESIGN

Thanks to a **10% volume reduction compared to previous models** and the slim evaporator options, you have more space available underneath the truck chassis and within the cargo box (see page 15).

## MULTI-TEMPERATURE CONFIGURATIONS

The UT-R Spectrum enables a range of two and three compartment configurations for **multi-temperature flexibility** when delivering fresh and frozen goods (see page 16).

## SIMPLE AND INTUITIVE CONTROLLER

The easy-to-use TSR-3 controller is intuitive to use for easy and fast adjustments (see page 17).

## MULTIPLE POWER SOURCES

The UT-Series can be powered by **diesel, shore power, and in Hybrid mode when the truck engine is operating (optional)** (see page 12).

# The right refrigeration solution for your application

## AT HOME IN THE CITY

City deliveries have specific requirements including quick temperature recovery after multiple drops, low noise and emission levels, and single and multi-temperature deliveries. The UT-Series meets these requirements, as well as reducing maintenance costs and increasing uptime and cargo safety so shipments reach their destination in perfect condition.

## OUT ON THE ROAD

When it comes to long-haul deliveries, fleets need reliable refrigeration that requires less maintenance, operates quietly to reduce impact on drivers and lower fuel consumption reduce operating costs. The UT-Series does all this while guaranteeing autonomous operation for improved cargo safety during transport in rigid trucks or drawbar trailer combinations.





**TAKING TO THE SKIES**

Airport catering is a specialized application, requiring a refrigeration unit that can operate reliably on a scissor-lift truck, as well as delivering high-capacity refrigeration with low fuel consumption and emissions. The UT-Series achieves this in a low noise, low emission unit. It also offers reduced maintenance requirements and costs, increased uptime, and improved cargo safety.



**DELIVERING PHARMACEUTICALS**

The main focus when transporting pharmaceutical goods is cargo safety. This requires precise temperature control, impeccable reliability, and accurate telematics and independent datalogging for temperature monitoring. The UT-Series delivers this and more. Plus, for additional peace of mind, it is possible to be used as a back-up for a primary nose-mount or trailer unit on the same body.

# Meeting your refrigeration needs. Exceeding your expectations.

Whatever your refrigeration requirements, we have a solution that meets your needs. Offering low maintenance costs, reduced carbon footprint, and increased uptime, the UT-Series will exceed your expectations.

**LOWER MAINTENANCE REQUIREMENTS**

- Offering best-in-class technology, the UT-Series delivers quality you can rely on, delivery after delivery.
- Thermo King’s reciprocating compressor is the industry standard for proven reliability and easy service.
  - The redesigned enclosure and components reduce water and debris ingress and avoid corrosion.
  - All serviceable electrical and engine components are easily accessible from the side of the road.
  - The redesigned power tray improves belt alignment for exceptional belt life.
  - Extended maintenance schedule improves uptime and lowers costs.
  - 2-year warranty from factory as standard to mitigate risks on repair costs.
  - Thermo King ThermoKare contracts are available on request to extend the 2-year standard warranty by a 3rd and 4th year and to offer a set of tailored service contracts for full peace of mind.

**WHISPER QUIET OPERATION**

Increasing strict regulations require vehicle to be quieter than ever before. Noise levels for the UT-Series are reduced by 3dB(A) compared to the legacy undermount unit. With the optional Whisper Kit an additional reduction on noise can be achieved for even lower emissions. As well as reducing the noise impact on the local community, it also improves your driver’s comfort as the noise source is further away from the cab.



**ENSURING CARGO SAFETY**

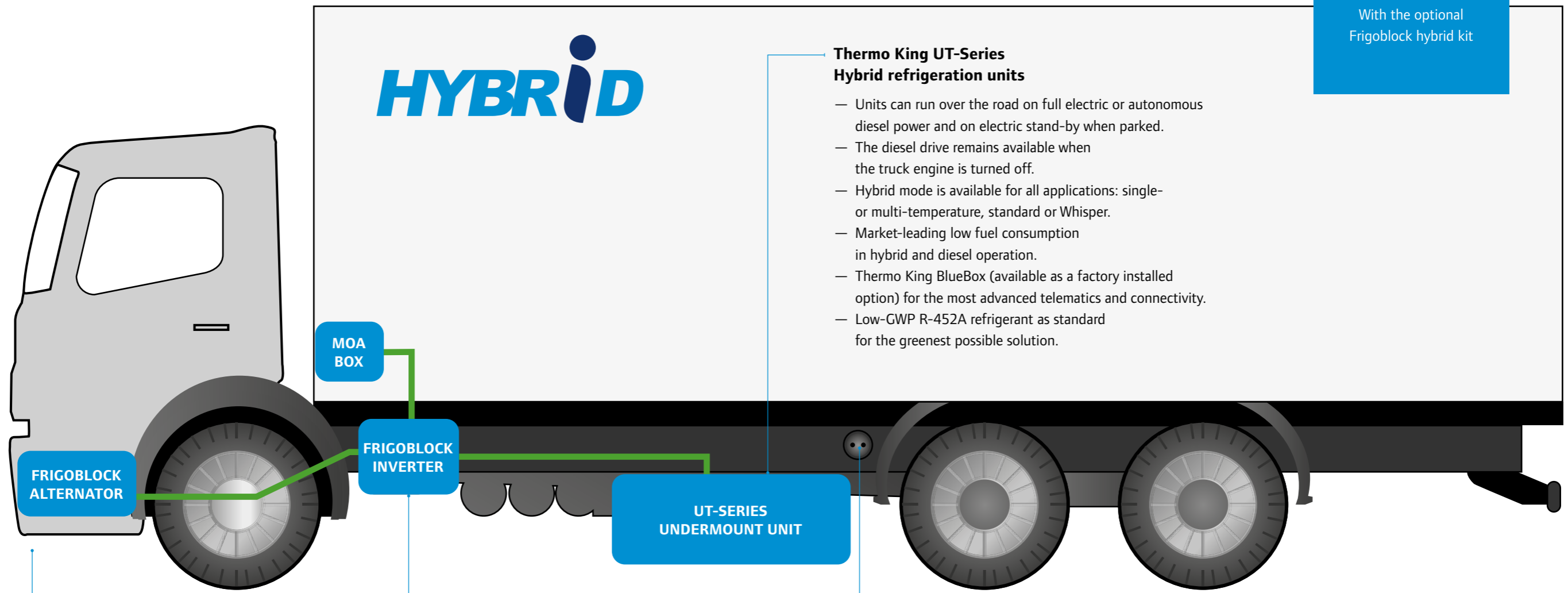
Thanks to the highest cooling capacity in the market, the UT-Series reaches the set-point quickly from the ambient temperature and recovers the temperature quickly after door openings to ensure a more consistent temperature for your cargo. Smooth and steady temperature control results in ideal conditions for sensitive fresh product, extending product shelf life.

**CHOICE OF POWER SOURCES**

The UT-Series can be powered in multiple ways for flexibility. As standard, the unit can be powered by diesel from the main truck tank or a separate tank or run on electricity when in shore power mode.

With the optional Frigoblock hybrid kit, the UT-Series can also be powered by the truck engine when the engine is operating and easily switched between alternator power and shore power, **reducing fuel consumption by up to 50% and minimizing environmental impact.** The hybrid kits are widely compatible with the truck models available on the European market.

UP TO  
**50%**  
LESS FUEL CONSUMPTION  
With the optional Frigoblock hybrid kit



**Thermo King UT-Series Hybrid refrigeration units**

- Units can run over the road on full electric or autonomous diesel power and on electric stand-by when parked.
- The diesel drive remains available when the truck engine is turned off.
- Hybrid mode is available for all applications: single- or multi-temperature, standard or Whisper.
- Market-leading low fuel consumption in hybrid and diesel operation.
- Thermo King BlueBox (available as a factory installed option) for the most advanced telematics and connectivity.
- Low-GWP R-452A refrigerant as standard for the greenest possible solution.

**Frigoblock alternator and inverter technology:**

- Approved by leading truck manufacturers, our water-cooled asynchronous alternator combined with our inverter filter has been developed to provide:
- Constant voltage and frequency to the unit regardless of vehicle engine speed.
  - Rapid start-up with low mechanical stress.
  - Optimum load temperature control with minimum power consumption.
  - Compact design, low weight and an extended life.

**Frigoblock inverter transforms electricity from alternator to power UT-Series refrigeration units**

- Delivers constant voltage and frequency to the unit regardless of vehicle engine speed.
- Guarantees rapid start-up of the unit with low mechanical stress.
- Provides optimum load temperature control with minimum power consumption.

**REDUCING YOUR ENVIRONMENTAL IMPACT**

Thermo King has found the right balance between system efficiency, fuel consumption, and performance to reduce both your carbon footprint and your costs.



**Maximum system efficiency**

by optimizing compressor and engine speed ratios.

**Reduced engine consumption and improved temperature management**

with the Electronic Throttling Valve (ETV), optimizing the refrigeration system's efficiency.

**Longer intervals between oil changes**

reduces clean-up, disposal costs and the potential for spillage.

**Fully compatible units with EN-590 biofuel up to B7**

(7% biofuel/93% petroleum diesel) without a change in maintenance schedule.

**Thermo King's GreenTech engines are the cleanest engines**

on the refrigeration unit market and reduce emissions, waste, and noise pollution. GreenTech engines exceed the most stringent EU standards (NRMM: Stage V compliant).

UP TO  
**90%**  
CO<sub>2</sub> EMISSIONS  
REDUCTION

Full compatibility with **100% HVO biofuel** (Hydrotreated Vegetable Oil) according to EN-15940. This can **reduce CO<sub>2</sub> emissions by up to 90%** without need for change in the maintenance schedule of the unit.

UP TO  
**80%**  
FUEL CONSUMPTION AND  
CO<sub>2</sub> EMISSIONS REDUCTION

The cycle-sentry mode on the TSR-3 controller stops the engine when refrigeration is not required, only restarting when operation is needed again. This can **reduce fuel consumption and CO<sub>2</sub> emissions by up to 80%**, as well as increase component life and reduce maintenance costs.

OVER  
**10%**  
FUEL CONSUMPTION  
REDUCTION

The latest all-aluminum **microchannel condenser coil** design **reduces fuel consumption, reduces weight**, and requires a smaller refrigerant charge to **reduce fuel consumption by over 10%** compared to a conventional coil.

**40kg**  
OVERALL VEHICLE  
WEIGHT REDUCTION

The compact and lightweight design **reduce the overall vehicle weight by 40kg** compared to the legacy undermount unit, increasing vehicle payload and enhancing fuel efficiency.

**10%**  
INCREASED  
CHASSIS SPACE

By reducing the unit enclosure length by 200 mm, the UT-Series has **reduced its volume by 10%** compared to the legacy undermount unit. This requires less space under the truck chassis, giving you more space for other accessories.

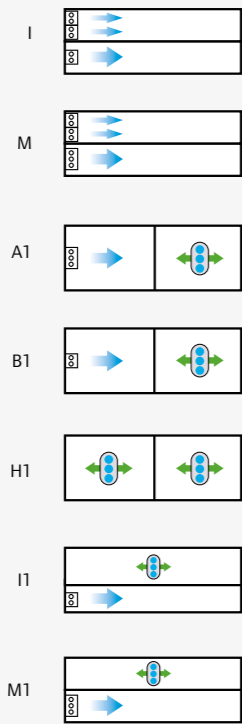
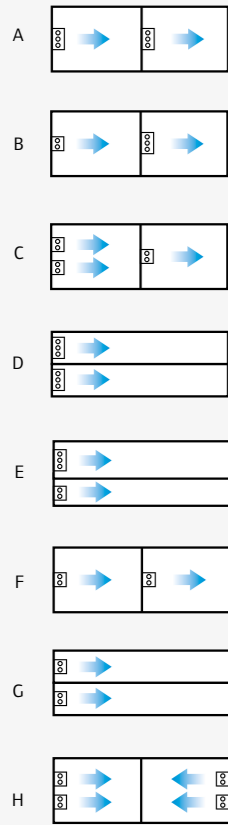


**INCREASED VERSATILITY TO OPTIMIZE FLEET UTILIZATION**

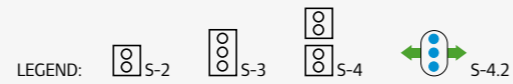
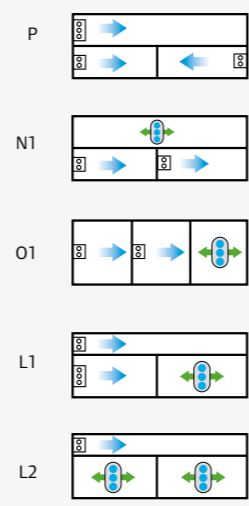
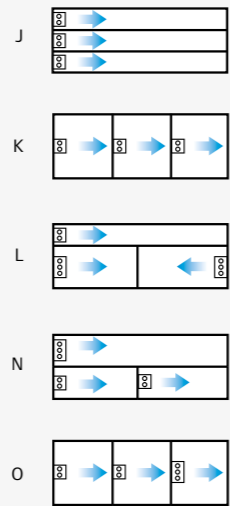
The UT-R Spectrum protects fresh and frozen goods in a variety of two and three component configurations for multi-temperature flexibility. This versatility maximizes the utilization of your fleet during multi-drop operations.

**ZONE PLANS**

**2 ZONES**



**3 ZONES**



**INTUITIVE TSR-3 CONTROLLER**

The easy-to-use TSR-3 controller enables optimum management of all features within the unit, helping you to lower your costs with each load.



TSR-3 STANDARD IN-CAB DISPLAY



TSR-3 PREMIUM IN-CAB DISPLAY

**Intuitive interface** helps make operator errors a thing of the past. All information is displayed with **easy-to-understand symbols** and is **straightforward to navigate** in 21 languages.

**Ensured fuel savings** thanks to the **cycle-sentry mode**, **optional electronic door switch**, and more.

**ServiceWatch™** deliver **clearer diagnostics** for service technicians, facilitating troubleshooting and shortening response times.

**Features & alerts** ensure the **outstanding quality** of your delivered goods.

**Tracking telematics system** available as an option to **monitor and control** the unit's operation **remotely**.

**TSR-3 Premium in-cab display** is available as standard on UT-R Spectrum and as an option on single temp models for even **greater control of every aspect** of the UT-Series.

**ADVANTAGES**

- ✓ GREAT ZONE FLEXIBILITY
- ✓ 2 & 3 ZONE CONFIGURATION
- ✓ S-2, S-3, S-4.2 OR S-4
- ✓ REMOTE EVAPORATORS
- ✓ ATP CERTIFIED



# Features and options to enhance your refrigeration solution



## MANAGE MAINTENANCE COSTS

**ThermoKare** offers a complete selection of service contract solutions to help manage your maintenance costs and your total cost of ownership (TCO).

## REDUCED NOISE IMPACT

**Whisper option** allows for additional 2dB(A) noise reduction compared to the standard unit, for even quieter operations in noise-sensitive areas.

## LONGER BATTERY LIFE

A range of batteries are available to extend the service life of your refrigeration system.

**EnergyOne® silver battery 640CCA** incorporates silver-calcium technology to extend service life to more than 20% than a conventional battery.

**EnergyOne® gold battery 760CCA** is ideal for colder climates where it delivers greater power than the standard battery.

**EnergyOne® platinum battery 880CCA** maintains capacity at extremely low temperatures better than a wet cell battery. This saves you the time and cost of battery replacements during its expected 5-8 year service life.

## MONITOR YOUR EQUIPMENT

Thermo King's **TracKing telematics solutions** offer an economical and reliable way to monitor and control the refrigeration unit remotely to keep your valuable loads safe.

Additionally, TracKing helps you to increase truck asset utilization, reduce operating costs, increase customer satisfaction, improve security, and lower insurance risks.

## ENHANCED CONTROLLER OPTIONS

The premium **TSR-3 in-cab display** enables greater control of every aspect of the UT-Series unit, including access to all programmable features in 21 languages.

Additionally, the **rear remote control** allows easy control of the refrigeration unit from inside the rear of the truck for greater energy efficiency and safe loading.

**ADVANCED DATA SERVICES**

A range of data services are available to help improve your reporting and give better insights into your fleet.

**TouchLog data logger** is compact, easy to use, flexible to download data via USB and quick to generate physical printouts. Equipped with temperature sensors, it can record box temperatures and set points and store min. 1 year of data in compliance with standard **EN-12830**.

**Wintrac** (data analysis software) offers customized reporting of temperature and operational data from **TouchLog** or **TrackKing**.

**CUSTOMIZED INSTALLATION**

In addition to the standard offering, the **UT-Series** offers optional fittings for a more flexible installation that meet your individual requirements. These include:

- **Evaporator guard** provides maximum protection against evaporator damage during loading and unloading.
- **Body mount enclosure** allows external mounting of in-cab controller displays on drawbar trailer and swap-body applications for easy access.
- **Thermolite™ solar panel** reduces fuel consumption and emissions by using solar power instead of diesel engine power to charge the refrigeration unit's battery.
- **90 liter fuel tank** for diesel and biofuel. Designed for maximum performance of our **Electronic fuel sensor**.

**HYBRID OPERATION**

Instead of taking the required power from the diesel engine, the UT-Series with **Frigoblock hybrid kit** can be powered by the truck engine while the engine is running. This **reduces fuel consumption by up to 50%** and **improves your environmental footprint**.

**TK PHARMASOLUTIONS**

Thermo King set new industry standards for reliability and for precise temperature control for transporting pharmaceutical products. The **UT-Series** offers an optional **Pharma Kit**, enabling your unit to meet Pharma GDP qualification requirements. It ensures that product quality is maintained to the very highest standard throughout the distribution chain.

**Precise Temperature Control (PTC)** option allows even greater temperature accuracy on single temperature applications through enhanced control of the refrigeration system.

FEATURES AND OPTIONS	UT-1000R	UT-1400R	UT-R SPECTRUM
<b>LIFE COST MANAGEMENT</b>			
THERMOKARE SERVICE CONTRACTS	■	■	■
2-YEAR WARRANTY COVERAGE	●	●	●
CYCLE-SENTRY START/STOP CONTROL SYSTEM	●	●	●
EMI 2000 EXTENDED MAINTENANCE	●	●	●
THERMO KING ENERGYONE SILVER BATTERY 640CCA	●	●	●
THERMO KING ENERGYONE GOLD BATTERY 760CCA	□	□	□
THERMO KING ENERGYONE PLATINUM BATTERY 880CCA	□	□	□
<b>DATA CAPTURE &amp; COMMUNICATIONS</b>			
TRACKING (TRACKING AND LOAD MONITORING)	□ ■	□ ■	□ ■
WINTRAC (DATA ANALYSIS SOFTWARE)	■	■	■
TOUCHLOG DATA LOGGER	□ ■	□ ■	□ ■
<b>LOAD PROTECTION</b>			
AUTO PHASE CORRECTION	●	●	●
DIESEL/ELECTRIC AUTO SWITCHING	●	●	●
DOOR SWITCHES	□	□	□
TSR-3 STANDARD IN-CAB DISPLAY	●	●	○
<b>CUSTOMIZATION</b>			
TSR-3 PREMIUM IN-CAB DISPLAY	□	□	●
WHISPER KIT	□	□	□
LOW AMBIENT KIT	□	□	□
EVAPORATOR GUARD	■	■	■
TSR-3 REAR REMOTE CONTROL	□	□	□
REMOTE STATUS LIGHT AND COMBINATION DISPLAY	■	■	■
BODY MOUNT ENCLOSURE	■	■	■
90L FUEL TANK	■	■	■
ELECTRONIC FUEL LEVEL SENSOR	■	■	■
HYBRID KIT	■	■	■
THERMOLITE™ SOLAR PANEL	■	■	■
PHARMA KIT	○	■	■

○ NOT AVAILABLE   ● STANDARD FEATURE   □ OPTION: FACTORY SUPPLIED   ■ OPTION: DEALER SUPPLIED



# Specifications

SPECIFICATIONS				MEDIUM RANGE	LARGE RANGE				MULTI-TEMP
				UT-1000R (ES-800)	UT-1400R (S-3 + S-3)	UT-1400R (E-EVAP)	UT-R XTREME (S-3 + S-3)	UT-R XTREME (E-EVAP)	UT-R SPECTRUM
COOLING CAPACITY	AMBIENT TEMPERATURE	BOX TEMPERATURE		FRESH ONLY APPLICATION. ATP NOT AVAILABLE.				NOMINAL S-4 + S-3 + S-2	
HIGH SPEED DIESEL	30 °C	0 °C	W	9700	12200	13100		11300	
	30 °C	-20 °C	W	5300	6600	7100		6400	
ELECTRIC STANDBY	30 °C	0 °C	W	8400	9900	10400		10300	
	30 °C	-20 °C	W	4500	4900	5300		4500	
HIGH SPEED DIESEL (HIGH AMBIENT)	55 °C	0 °C	W				6700	7100	
	55 °C	20 °C	W				12200	12900	
<b>HEATING CAPACITY</b>									
HIGH SPEED DIESEL	-18 °C	18 °C	W	4900	4400	4400			
ELECTRIC STANDBY	-18 °C	18 °C	W	3200	3200	3200			
<b>AIRFLOW</b>									
SINGLE TEMP EVAPORATOR			m³/hr	2640	4450	3350	4450	3350	
S-2			m³/hr					1420	
S-3			m³/hr					2350	
S-4.2 (DUAL DISCHARGE)			m³/hr					2550	
S-4			m³/hr					2840	
<b>WEIGHT</b>									
HOST + BATTERY + EVAP(S)			kg	514	583	542	583	542	
				S-3 + S-3=583					
				S-3 + S-4.2=585					
				S-3 + S-3 + S-2=626					
<b>SOUND PRESSURE LEVEL @7M (DIN 8958 STANDARD)</b>									
HIGH SPEED DIESEL			dB(A)	70,7	73,4	73,4	73,4	73,4	
LOW SPEED DIESEL			dB(A)	66,7	66,7	66,7	66,7	66,7	
ELECTRIC STANDBY			dB(A)	63,4	63,4	63,4	63,4	63,4	
<b>REFRIGERANT</b>									
TYPE				R-452A	R-452A	R-452A	R-134a	R-134a	
CHARGE*			kg	3,9	4,85	4,6	4,85	4,6	
<b>MAINTENANCE LEVEL</b>									
EXTENDED MAINTENANCE INTERVAL			h	2000	2000	2000	2000	2000	

\* ACTUAL CHARGE REQUIRED IS DEPENDENT OF INSTALLATION LAYOUT AND CONFIGURATION. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. AIRFLOW VOLUME AND WEIGHT WILL BE CUMULATIVE. CAPACITY WILL DEPEND ON UNIT CONFIGURATION.

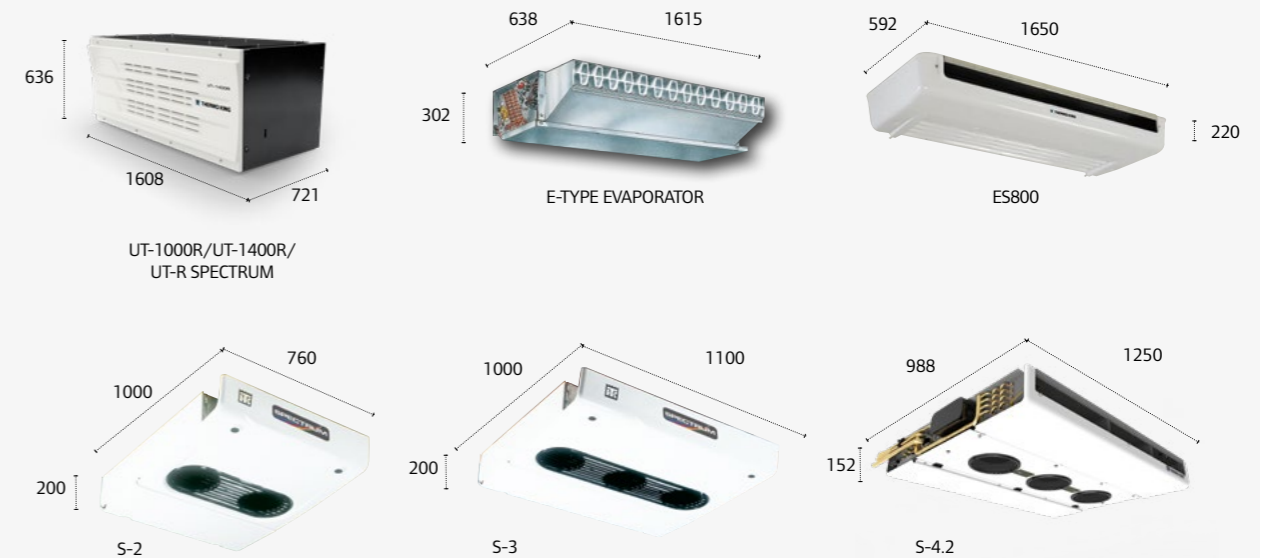


Thermo King warrants the new product delivered will be free of defects in material and workmanship for the period of time specified in the applicable warranties. Specific terms of the Thermo King warranty are available on request.

BOX LENGTH IN METRES	< 8.0	> 8.0	> 8.0
	5.0 - 8.0 *	> 8.0 *	> 8.0
UNIT MODEL	UT-1000R	UT-1400R	UT-R SPECTRUM

\*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.

## DIMENSIONS (MM)



S-2, S-3 AND S-4.2 REMOTE EVAPORATORS CAN BE RECESSED IN THE BOX CEILING BY A MAX OF 25MM FOR EVEN SLIMMER EVAPORATOR PROFILE.

## CONTACT YOUR NEAREST DEALER

The Thermo King dealer network boasts over **500 authorized service points** in **75 countries** that are **open and available 24/7**.





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

Find your nearest dealer on  
[dealers.thermoking.com](https://dealers.thermoking.com)

TRANE  
TECHNOLOGIES