THERMO KING

V- and VX-Series

Flexible, powerful, dependable

SINGLE- AND MULTI-TEMPERATURE REFRIGERATION SOLUTIONS
FOR SMALL, MEDIUM AND LARGE VANS & TRUCKS



TRANE TECHNOLOGIES

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Superior non-diesel temperature control for vans, small and large trucks

Thermo King V- and VX-Series are an extensive range of refrigeration solutions for vans and trucks. The range has minimal environmental impact as the refrigeration unit compressor is driven by the vehicle engine, offering exceptionally low noise and low emissions.
Many common components are shared across the range including the Direct Smart Reefer in-cab controller and modular options to suit every customer.

No matter what your business, we have a model to suit including single or dual compartment vehicles carrying at fresh, chilled or frozen temperatures.

Single or Multi-temperature

A solution for every need

No matter what your business entails, whether you're delivering delicate flowers requiring a precise chilled environment or transporting frozen meals that need to stay rock-solid, we have a refrigerated vehicle model to perfectly suit your needs.

Our selection includes both single and dual compartment options, allowing you to optimize space and maintain optimal temperatures for your specific cargo, be it fresh, chilled, or frozen.

V-SERIES FOR SMALL TRUCKS AND VANS

V-200s, V-200, V-300 offer the optimal temperature control solution for single and multi-temperature vans and small trucks up to 28 m³ fresh and 21 m³ frozen.

- Small and lightweight but powerful units with big performance.
- Slim, aerodynamic, and good looking.
- Extremely compact design to blend with small vehicle body shapes.
- Condenser section can be roof or front mounted.
- Also available as multi-temperature Spectrum version providing temperature control for two compartments.

V SERIES MEDIUM TRUCK AND VANS

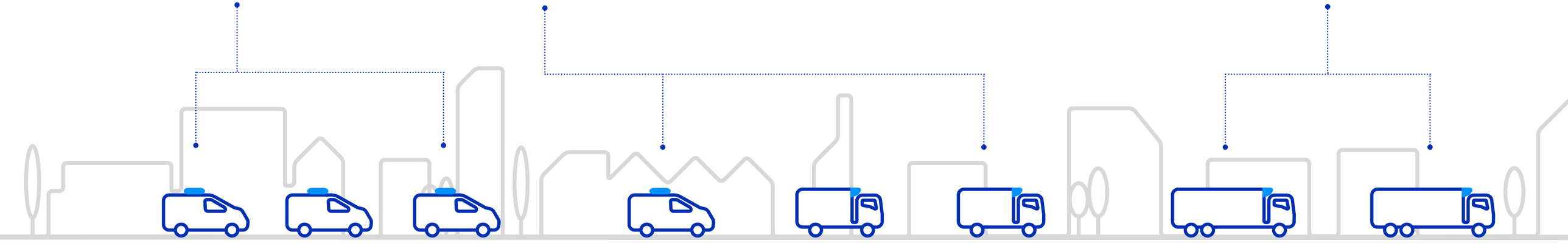
V-400X, V-500X and V-600X offer the optimal temperature control solution for single and multi-temperature vans and medium trucks up to 10 m³ fresh and 50 m³ frozen.

- Increased performance both on road and stand-by operation.
- Swash plate compressor for ease of installation.
- User friendly and advanced controller Direct Smart Reefer.
- Nose, roof or recessed roof condenser unit for large vans and medium chassis cab trucks.

V SERIES LARGE TRUCK

V-800, V-1000 offer the optimal temperature control solution for single and multi-temperature large trucks up to 30 m³ fresh and 60 m³ frozen.

- Direct drive, non-diesel temperature control solution for operators of large trucks.
- An unbeatable exceptional performance, non-diesel, low noise, low maintenance and low weight solution.
- The most powerful unit in the vehicle-powered range, both in cooling and heating modes.
- The range has minimal environmental impact as the refrigeration unit compressor is driven by the vehicle engine, offering exceptionally low noise and low emissions.
- Compact design with high refrigeration performance to meet single and multi-temperature application needs.
- Nosemount low size and compact condenser unit for the largest trucks.
- Extremely powerful airflow to guarantee load protection.
- Also available as multi-temperature Spectrum version providing temperature control for two compartments.



MODEL BOX VOLUME	V-200S 4 m³ to 16 m³	V-200 7 m³ to 22 m³	V-300 8 m³ to 25 m³	V-400X 10 m³ to 27 m³	V-500X 15 m³ to 45 m³	V-600X 24 m³ to 50 m³	V-800 30 m³ to 54 m³	V-1000 40 m³ to 60 m³

V-Series for small trucks and vans

Flexible. Powerful. Dependable.

As Thermo King's most powerful vehicle-powered refrigeration series for both heating and cooling, the V-Series has minimal environmental impact, exceptionally low noise, and reduced emissions. Thanks to its extensive range, the V-Series has a model to suit, with single- and multi-temperature versions for vans and small trucks up to 25 m³.

MODELS



Dimensions: 789 (l) x 500 (w) x 242 (h)

- V-200s
- V-200/V-300



Dimensions: 1180 (l) x 485 (w) x 222 (h)

- V-200/V-300



Dimensions: 1180 (l) x 535 (w) x 221 (h)

- V-200/V-300 MAX Spectrum

COST-EFFICIENT REFRIGERATION

High performance and high efficiency ensure effective temperature control and a low total cost of ownership.

EFFICIENT AND SUSTAINABLE

The latest low Global Warming Potential (GWP) refrigerant is available without compromising performance.

URBAN DELIVERIES

Deliver night and day to ULEZs and LEZs thanks to the V-Series' low noise and low emissions.

INTUITIVE CONTROL

The user-friendly Direct Smart Reefer technology gives you complete control of your refrigeration from the comfort and safety of the cab.

No matter your business, we have a system to suit

Thermo King V-Series is an extensive range of refrigeration solutions for vans and small trucks. The range has minimal environmental impact as the refrigeration unit compressor is driven by the vehicle engine, offering exceptionally low noise and low emissions. Many common components are shared across the range including the Direct Smart Reefer in-cab controller and modular options to suit every customer.

No matter what your business, we have a model to suit including single or dual compartment vehicles carrying at fresh, chill or frozen temperatures.

Your customers demand that you are adaptable, so we gave you a system which is as flexible as you are.

Choose from a wide range of units, nosemount, roofmount and recessed roofmount options for both single and multi-temperature applications.



V-SERIES FOR SMALL TRUCKS AND VANS



RAPID AND COST-EFFECTIVE SERVICE AND MAINTENANCE

V-Series units are designed with ease of service as a priority. Your DSR controller provides maintenance reminders and uses easy to understand alarm codes to speed up diagnosis. Lifting the condenser cover gives full access to key components while the unit is still running.

LOW NOISE AND ZERO EXHAUST EMISSIONS MEAN THAT YOU ARE WELCOME TO DELIVER ANYWHERE, ANYTIME.

Urban deliveries demand people-friendly equipment so you can access your customers 24/7. By using the vehicle engine to power our compressor, you have a system which has no engine, no emissions and extremely low noise.

EASY INSTALLATION KEEPS COSTS TO A MINIMUM

To keep your initial costs down, we make installation really straightforward. Depending on the model, we provide lifting eyes, easy to access mounting holes, pre-installed Jet Cool™ compressor injection cooling and external evaporator connections.

PRIORITY PERFORMANCE FOR PRIORITY PROTECTION

Spectrum multi-temperature models feature Zone Priority which allows you to choose one compartment for maximum cooling or heating, should the application require it. With this option enabled through the controller, temperature pulldown can be up to 40% faster.



Single temperature models specifications

MODELS		V-200		V-200S MAX		V-200 MAX		V-300		V-300 MAX	
Evaporator		**ES200**		**ES150**		**ES200**		**ES300**		**ES300**	
PERFORMANCE											
System net cooling capacity under ATP conditions including 30°C ambient, European standard											
Return air to evaporator	°C	0°C	-20°C	0°C	-20°C	0°C	-20°C	0°C	-20°C	0°C	-20°C
Air return/on the road	W	2 240	970	2 420	1 210	2 765	1 490	2 800	1 210	3 520	1 850
Electric stand-by 50 Hz	W	1 910	780	1 500	710	2 400	1 220	2 140	850	2 870	1 440
Heating capacity: at -18°C ambient/2400 rpm											
On the road swash plate compressor	W	-		2 200		2 800		-		3 100	
Electric standby operation	W	-		1 300		2 050		-		2 250	
Airflow											
Airflow volume @ 0 pa static pressure	m³/h	2 x 1 152		1 x 1 150		2 x 1 152		3 x 1 152		3 x 1 152	
TECHNICAL DATA											
Weight											
Condenser w/o electric standby	kg	25		25		25		25		25	
Condenser with electric standby	kg	70		43		72		70		72	
Evaporator	kg	15		14		15		18		18	
Compressor											
Model		QP13		TK08N		QP13		QP15		QP15	
Displacement	cc	131		82		131		146.7		146.7	
Number of cylinders		6		6		6		6		6	
Electric Standby Motor											
Voltage/phase/frequency		230/1/50 230/1/60 400/3/50 230/3/50 230/3/60		230/1/50		230/1/50 230/1/60 400/3/50 230/3/50 230/3/60		230/1/50 230/1/60 400/3/50 230/3/50 230/3/60		230/1/50 230/1/60 400/3/50 230/3/50 230/3/60	
Rating	kW	3.7 (400/3/50)		1.6		3.8 (400/3/50)		3.7 (400/3/50)		3.8 (400/3/50)	
Refrigerant											
Refrigerant		R-134a		R-404A/ R-452A		R-404A/ R-452A		R-134a		R-404A/ R-452A	
Charge	kg	10/30: 1.1 20/50: 1.35		1.2		10/30: 1.0 20/50: 1.2		10: 1.1 20: 1.35		10/30: 1.1 20/50: 1.35	
Generic											
Controller		DSR III									
Defrost											
Defrost		Automatic hot gas defrost									

Multi-temperature models specifications

MODELS		V-200 MAX SPECTRUM			
Evaporator		**ES100 MAX + ES100 MAX**		**ES100 MAX + ES100N MAX***	
PERFORMANCE					
Refrigeration capacity: at 30°C ambient					
Return air to evaporator	°C	-20°C		-20°C	
Capacity on engine power	W	1 480		1 480	
Capacity on electrical stand	W	1 110		1 110	
Refrigeration capacity: Individual Cooling Capacity					
Evaporator		**ES100 MAX**		**ES100N MAX***	
Return air to evaporator		0°C	-20°C	0°C	-20°C
Capacity on engine power	W	2 370	1 230	2 260	1 170
Capacity on electrical stand	W	2 150	1 040	2 010	1 010
Heating capacity					
On the road	W	2 800			
Electric standby operation	W	2 050			
Airflow					
Evaporator		**ES100 MAX + ES100 MAX**		**ES100 MAX + ES100N MAX***	
On high speed engine operation	m³/h	695		695	
TECHNICAL DATA					
Weight					
Condenser w/o electric standby	kg	25			
Condenser with electric standby	kg	75			
Evaporator ES100 MAX	kg	9			
Compressor					
Model		QP 13			
Displacement	cc	131			
Number of cylinders		6			
Electric Standby Motor					
Voltage/phase/frequency		230/1/50 - 230/1/60 - 400/3/50 - 230/3/50 - 330/3/60			
Rating	kW	3.8			
Refrigerant					
Refrigerant		R-404A/R-452A			
Charge	kg	1.35			
Generic					
Controller		DSR III			
Defrost					
Defrost		Automatic hot gas defrost			

Capacity on engine power given at 2 400 rpm (atp conditions)
* ES100N only available upon special request. Please contact your local dealer.

MODELS		V-300 MAX SPECTRUM	
Evaporator		**ES150 + ES150**	**ES150 + ES100**
PERFORMANCE			
Refrigeration capacity: at 30°C ambient			
Return air to evaporator	°C	-20°C	-20°C
Capacity on engine power	W	1 880	1 760
Capacity on electrical stand	W	1 460	1 220
Refrigeration capacity: Individual Cooling Capacity			
Evaporator		**ES150 MAX**	**ES100 MAX**
Return air to evaporator		0°C / -20°C	0°C
Capacity on engine power	W	3 080 / 1 620	2 410
Capacity on electrical stand	W	2 490 / 1 350	2 220
Heating capacity			
On the road	W	3 100	
Electric standby operation	W	2 250	
Airflow			
Evaporator		**ES150 MAX**	**ES100 MAX**
On high speed engine operation	m³/h	890	770
TECHNICAL DATA			
Weight			
Condenser w/o electric standby	kg	25	
Condenser with electric standby	kg	75	
Evaporator ES150 MAX	kg	12.5	
Evaporator ES100 MAX	kg	9	
Evaporator ES200 MAX	kg	15	
Compressor			
Model		QP 15	
Displacement	cc	146.7	
Number of cylinders		6	
Electric Standby Motor			
Voltage/phase/frequency		230/1/50 - 230/1/60 - 400/3/50 - 230/3/50 - 330/3/60	
Rating	kW	3.8	
Refrigerant Charge			
Refrigerant		R-404A/R-452A	
Charge	kg	30: 1.55 - 50: 1.6	
Generic			
Controller		DSR III	
Defrost			
Defrost		Automatic hot gas defrost	



VX-Series for medium trucks and vans

High performance and sustainable refrigeration.

As Thermo King's most powerful vehicle-powered refrigeration series for both heating and cooling, the VX-Series has minimal environmental impact, exceptionally low noise, and reduced emissions. Thanks to its extensive range, the V-Series has a model to suit, with single- and multi-temperature versions for vans and small trucks up to 50m³.

MODELS

NOSEMOUNT



Dimensions: 1253 (l) x 631 (w) x 244* (h)

- V-400X
- V-400X MAX
- V-400X MAX Spectrum
- V-500X
- V-500X MAX

ROOFMOUNT



Dimensions: 1312 (l) x 825 (w) x 241* (h)

- V-600X MAX
- V-600X MAX Spectrum

* Above heights are cover height. Heights including fans: Nosemount - 276 mm - Roofmount - 273 mm

IMPROVED PERFORMANCE

The VX-Series unites performance with efficiency on the road:

- Up to 10% faster pulldown than its predecessor
- Lightweight and compact - 50% lighter than than its predecessor
- Increased refrigeration power 4000W - 6500W
- VX-Series models are ultra-light and compact, making it possible to maximize your payload

DESIGNED TO LAST

Compact and robust design that appeals and endures:

- Long-lasting corrosion-proof aluminum frame
- Future-proof design meets low emissions and low noise restrictions in cities
- Aerodynamic and modular design for nose, roof or recessed roofmount for easy installation

SMART CONTROL ON THE ROAD

The Direct Smart Reefer controller puts your driver in control:

- Continuous load and temperature monitoring for total cargo protection

LOW MAINTENANCE AND SERVICING

You can rely on the VX-Series to keep uptime up:

- Agile service and maintenance monitoring with Direct Smart Reefer controller (DSR)
- Maintenance reminders and intuitive alarm codes for fast diagnosis
- Easily accessible unit for rapid service and maintenance

24/7 CUSTOMER DELIVERIES

Get close to your customers anytime, anywhere:

- Extremely low emissions, noise and vibrations from unit
- Compliant with current and future (U)LEZ legislation

ROBUST AND RELIABLE

The future-proof aerodynamic design has been developed to meet the need of daily operations.

MINIMAL ENVIRONMENTAL IMPACT

Low noise, zero exhaust emissions, and no engine reduce the ecological footprint of the VX-Series.

LIGHT AND COMPACT

The ultra-light and compact units enable you to maximize your payload.

PRECISION TEMPERATURE CONTROL

The in-cab controller enables single- and multi-temperature control within 1°C.

Single temperature models specifications

SINGLE TEMPERATURE MODELS		V-400X		V-500X		V-600X	
PERFORMANCE							
Refrigeration capacity: at 30°c ambient atp conditions							
Setpoint	**°C**	**0°C**	**-20°C**	**0°C**	**-20°C**	**0°C**	**-20°C**
Capacity on engine power 2 400 rpm (R-134a)	W	3 220	-	4 190	-	-	-
Capacity on electric standby 400V/3PH/50Hz (R-134a)	W	2 370	-	2 570	-	-	-
Capacity on engine power 2 400 rpm (R-452a)	W	4 090	2 240	5 440	3 030	6 540	3 480
Capacity on electric standby 400V/3PH/50Hz (R-452a)	W	3 030	1 500	3 450	1 640	4 110	1 920
Heating capacity: at -18°c ambient/2400 rpm							
Setpoint	**°C**	**+18°C**		**+18°C**		**+18°C**	
Capacity on engine power 2 400 rpm (R-452a)	W	3 564		3 711		4 356	
Capacity on electric standby 50Hz 400V/3PH/50Hz (R-452a)	W	1 841		1 944		2 324	
Evaporator		**ES300**		**ES500**		**ES600**	
Airflow volume	m^3/h	1 420		2 353		2 505	
Width x Depth x Height	mm	985 x 551 x 178		1 336 x 596 x 226		1 331 x 592 x 240	
TECHNICAL DATA							
Weight							
Condenser (Standby)	kg	75					
Condenser (No Standby)	kg	60					
Evaporator	kg	18		26		28	
Road Compressor	kg	7					
Total Weight (Standby)	kg	102		110		112	
Total Weight (No Standby)	kg	87		95		97	
Condenser							
Condenser Dimensions (Nose)	mm	1 253 (W) x 631 (D) x 276 (H)					
Condenser Dimensions (Roof)	mm	1 312 (W) x 825 (D) x 273 (H)					
Controller							
DSR III Width x Depth x Height	mm	135 x 25 x 46					
Compressor: max recommended speed 3000 rpm							
Model		QP16					
Displacement	cc	163					
Number of cylinders		6					
Electrical							
Standby Voltage/ Phase/ Frequency options	V/PH/Hz	230V : 1PH : 50/60Hz 230V : 3PH : 50/60Hz 400V : 3PH : 50/60Hz					
Total current consumption on the road	12V DC (A)	36		44		44	
	24V DC (A)	20		25		25	
Refrigerant							
Charge R-134a	kg	1.8		2.1		-	
Charge R-452a – only MAX models	kg	2.0		2.0		2.3	
Defrost							
AHGD (Automatic Hot Gas Defrost)	R-134a R-452a	AHGD					

Multi-temperature models specifications

MULTI-TEMPERATURE MODELS		V-400X MAX SPECTRUM		V-600X MAX SPECTRUM			
Evaporator		**ES200 + ES200 MAX**	**ES300 + ES100 MAX**	**ES300 + ES300 MAX**	**ES300 + ES150 MAX**	**ES300 + 2 x ES150 MAX**	**ES500 + ES100N MAX**
PERFORMANCE							
Refrigeration capacity: at 30°C ambient ATP conditions							
Setpoint	°C	**-20°C**		**-20°C**			
Capacity on engine power 2 400 rpm (R-452a)	W	2 170		2 730			
Capacity on electric standby 400V/3PH/50Hz (R-452a)	W	1 420		1 880			
Refrigeration capacity: individual capacity		**ES100**	**ES200**	**ES300**	**ES100N**	**ES150**	**ES300**	**2 x ES150**	**ES500**
Setpoint	°C	**0°C / -20°C**	**0°C / -20°C**	**0°C / -20°C**	**0°C / -20°C**	**0°C / -20°C**	**0°C / -20°C**	**0°C / -20°C**	**0°C / -20°C**
Capacity on engine power 2 400 rpm (R-452a)	W	2 500 / 1 350	3 030 / 1 630	3 430 / 1 930	2 480 / 1 410	3 100 / 1 910	3 290 / 1 920	4 210 / 2 080	4 600 / 2 370
Capacity on electric standby 400V/3PH/50Hz (R-452a)	W	2 110 / 990	2 420 / 2 000	2 710 / 1 370	2 450 / 1 320	2 650 / 1 450	2 990 / 1 700	3 100 / 1 660	3 570 / 1 720
Evaporator									
Airflow volume	m^3/h	866	1 241	1 420	566	891	2 x 891	1 420	2 353
Heating capacity: at -18°C ambient									
Setpoint	°C	**+18°C**		**+18°C**					
Capacity on engine power 2 400rpm (R-452a)	W	3 570		4 360					
Capacity on electric standby 400V/3PH/50Hz (R-452a)	W	1 850		2 330					
TECHNICAL DATA									
Weight									
Condenser (Standby)	kg	75							
Condenser (No Standby)	kg	60							
Evaporator	kg	30	27	36	32	46	46		
Road Compressor	kg	7	7	7	7	7	7		
Total Weight (Standby)	kg	114	110	120	116	130	130		
Total Weight (No Standby)	kg	99	95	105	101	115	115		
Dimensions									
Condenser (nose)	mm	1 253 (W) x 631 (D) x 276 (H)							
Condenser (roof)	mm	1 312 (W) x 825 (D) x 273 (H)							
Controller									
DSR III Width x Depth x Height	mm	135 x 25 x 46							
Compressor: max recommended speed 3000 rpm									
Model		QP16							
Displacement	cc	163							
Number of cylinders		6							
Electrical									
Standby Voltage/ Phase / Frequency options	V/PH/Hz	230V : 1PH : 50/60Hz 230V : 3PH : 50/60Hz 400V : 3PH : 50/60Hz							
Total current consumption on the road	12V DC (A)	53	44	53	44	53	53		
	24V DC (A)	30	25	30	25	30	30		
Refrigerant									
Charge (R-452a)	kg	1.9	1.9	2.1	2.0	2.3	2.3		
Defrost									
AHGD (Automatic Hot Gas Defrost)	R-134a R-452a	AHGD							

V-Series for large trucks

Flexible. Powerful. Dependable.

As Thermo King's most powerful vehicle-powered refrigeration series for both heating and cooling, the V-Series has minimal environmental impact, exceptionally low noise, and reduced emissions. Thanks to its extensive range, the V-Series has a model to suit, with single- and multi-temperature versions for vans and small trucks up to 60m3.



MODELS

- V-800
- V-800 MAX
- V-800 MAX Spectrum
- V-1000
- V-1000 MAX
- V-1000 MAX Spectrum

Dimensions: 1864 (l) x 588 (w) x 536 (h)

COST-EFFICIENT REFRIGERATION

High performance and high efficiency ensure effective temperature control and low total cost of ownership.

INTUITIVE CONTROL

The user-friendly Direct Smart Reefer technology gives you complete control of your refrigeration from the comfort and safety of the cab.

URBAN DELIVERIES

Deliver night and day to ULEZs and LEZs thanks to the V-Series' low noise and low emissions.

EFFICIENT AND GREEN

The latest low Global Warming Potential (GWP) refrigerant is available without compromising performance.



V-1000

More capacity, more flexibility.

V-1000 is uniquely positioned to satisfy the needs of large truck operators with the benefits of advanced vehicle drive technology when it comes to sustainability, cost control, load protection and productivity.

The V-1000 unit from Thermo King easily matches the performance of the leading diesel offerings while delivering the low cost, low weight and compact size of a vehicle-powered unit. If you think that's too good to be true, prepare to be surprised.

READY FOR CHANGE

The V-1000 uses a compressor exclusively developed for Thermo King which, when driven by the truck engine produces performance previously unattainable in units of this type. This makes it a competitive initial investment compared to diesel powered unit with equivalent performance. High cooling capacity and high airflow guarantee load protection under the most arduous conditions. Total costs of ownership are driven down by low maintenance costs and low fuel consumption.

V-1000 IMPRESSIVE FACTS AND FIGURES

- 10,055 W @ 0/30 °C of cooling capacity at high speed position it almost 25% more powerful than its nearest diesel equivalent unit(s).
- Even low speed capacity comes close to matching diesel units while standby capacity is a massive 57% higher.
- Airflow, vital for total load protection, is 3,537 m^3/hr. That's a impressive 31% higher than its nearest diesel equivalent unit(s).
- Heating capacity is 1.3 times higher than its nearest equivalent diesel unit(s).

25% more powerful

than its nearest diesel equivalent unit(s).

SUSTAINABILITY

Transport solutions not only need to do the job, but do it in a way that minimises environmental impact. The V-1000 is an exceptionally "low-touch" performer, leaving diesel units out of sight when it comes to protecting the world we live in.

These are just some of the key environmental benefits of this remarkable system:

- No diesel emissions from the unit
- No CO_2 emissions from the unit
- Low noise when in operation
- Less additional weight on the vehicle
- More cargo carried per journey
- Easily installed on progressive fleets using LNG/CNG or bio-diesel.

COST CONTROL

The V-1000 positively impacts Total Cost of Operation (TCO) in these key areas:

- Fuel consumption, the principal cost of operating a refrigeration unit, is up to 54% less than an equivalent self-powered system.
- Maintenance costs including both parts and labour are cut by up to 33% thanks to the absence of a diesel engine.

PRODUCTIVITY

You want units in your fleet that pull their weight when it comes to the key measure of productivity. The V-1000 is an exceptional performer when compared with an equivalent diesel unit:

- **Weight is less than half of an equivalent unit,** giving savings of 250 kg without standby and 150 kg with standby. This means much more carrying capacity for the vehicle and more revenue for your operation.
- **Flexibility is exceptional.** The V-1000 comes in single or various multi-temperature configurations. Its compact profile make it ideal for high cabs and it's equally at home with multiple vehicle types including CNG, LNG or Biodiesel. Available in both 12 V or 24 V making it your perfect fit for trucks that range all the way from 3.5 tn to 25 tn depending on your application needs.

LOAD PROTECTION

Savings and productivity while vital are meaningless if there are any doubts about load protection. The V-1000 features exceptional performance which is why it can compete directly with self-powered units and in many cases, even outperform them.



57%

higher standby capacity than its nearest diesel equivalent unit(s).

31%

higher airflow than its nearest equivalent diesel unit(s).

1.3x

higher heating capacity than its nearest equivalent diesel unit(s).

Single temperature models specifications

MODELS		V-800	V-800 MAX 10/20		V-800 MAX 30/50		V-1000		V-1000 MAX 10/20		V-1000 MAX 30/50	
PERFORMANCE												
Evaporator		ES800	ES800		ES800		ES1000		ES1000		ES1000	
Refrigeration capacity: at 30 °C ambient												
Return air to evaporator	°C	0°C	0°C	-20°C	0°C	-20°C	0°C	-20°C	0°C	-20°C	0°C	-20°C
Capacity on engine power 2 400 rpm (r-452a)	w	5 680	7 940	4 050	7 950	4 190	6 460	-	10 060	5 050	9 970	4 810
Capacity on electric standby 400v/3ph/50hz (r-452a)	w	5 030	7 130	3 690	6 860	3 610	6 020	-	9 310	4 650	9 400	4 490
Heating capacity: at -18 °C ambient/2 400 rpm												
On the road swash plate compressor	W	-	3 600				-		8 000			
Electric standby operation	W	-	3 120				-		8 000			
Airflow												
Airflow volume @ 0 pa static pressure	m^3/h	2 680					3 537					
TECHNICAL DATA												
Weight												
Condenser w/o electric standby	kg	96	96		111		96		96		111	
Condenser with electric standby	kg	205	205		220		205		205		220	
Evaporator	kg	35					50					
Compressor												
Model		QP21					QP25					
Displacement	cc	215					250					
Number of cylinders		10					10					
Electric Standby Motor												
Voltage/phase/frequency		400/3/50 380/3/60 230/3/50 230/3/60					400/3/50 230/3/50 400/3/60 230/3/60					
Rating	kW	8.2 (400/3/50)					8.8 (400/3/50)					
Refrigerant												
Refrigerant		R-134a	R-404A/ R-452A				R-134a		R-404A/R-452A			
Charge	kg	10: 4.55 20: 4.85	10/30: 4.7 20/50: 5				10: 5.4 20: 5.7		10: 5.9 20: 6.2		30: 5.9 50: 6.2	
Generic												
Controller		DSR III										
Defrost												
Defrost		AHGS	AHGS		RC		AHGS		AHGS		RC	

AHGS = Automatic Hot Gas Defrost - RC = Reverse Cycle
Note: specifications are subject to change without notice.

Multi-temperature models specifications

MODEL		V-800 MAX SPECTRUM							
Evaporator		**ES400 MAX+ ES400 MAX**		**ES600MAX+ ES150 MAX**		**ES600 MAX+ 2x ES150 MAX**			
PERFORMANCE									
Refrigeration capacity: at 30°C ambient									
Return air to evaporator	°C	-20°C		-20°C		-20°C			
Capacity on engine power	W	4 140		3 900		4 070			
Capacity on electrical stand	W	3 520		3 380		3 370			
Refrigeration capacity: Individual Cooling Capacity									
Evaporator		**ES400 MAX**		**ES600 MAX**		**ES150 MAX**		**2 X ES150 MAX**	
Return air to evaporator		0°C	-20°C	0°C	-20°C	0°C	-20°C	0°C	-20°C
Capacity on engine power	W	6 060	3 230	6 320	3 060	3 500	1 930	5 640	2 995
Capacity on electrical stand	W	5 670	3 090	6 120	3 050	3 580	1 950	5 045	2 705
Heating capacity									
On the road	W	4 500							
Electric standby operation	W	4 000							
Airflow									
Evaporator		**ES400 MAX + ES400 MAX**		**ES600 MAX + ES150 MAX**		**ES600 MAX + 2 X ES150 MAX**			
On high speed engine operation	m³/h	1 760 x 2		2 260 + 890		2 260 +(2 x 890)			
TECHNICAL DATA									
Weight									
Condenser w/o electric standby	kg	100							
Condenser with electric standby	kg	160							
Evaporator ES600 MAX	kg	28							
Evaporator ES400 MAX	kg	20							
Evaporator 2 X ES150 MAX	kg	25							
Evaporator ES150 MAX	kg	12.5							
Swash plate compressor	kg	8.5							
Compressor									
Model		QP21							
Displacement	cc	215							
Number of cylinders		10							
Electric Standby Motor									
Voltage/phase/frequency		400/3/50 - 230/3/50 - 400/3/60 - 230/3/60							
Rating	kW	8.2 (400/3/50)							
Refrigerant Charge									
Evaporator		**ES400 MAX + ES400 MAX**		**ES600 MAX + ES150 MAX**		**ES600 MAX + 2 X ES150 MAX**			
Refrigerant		R-404A/R-452A							
Charge	kg	5.2		5.0		5.15			
Generic									
Controller		DSR III							
Defrost									
Defrost		Automatic hot gas defrost							

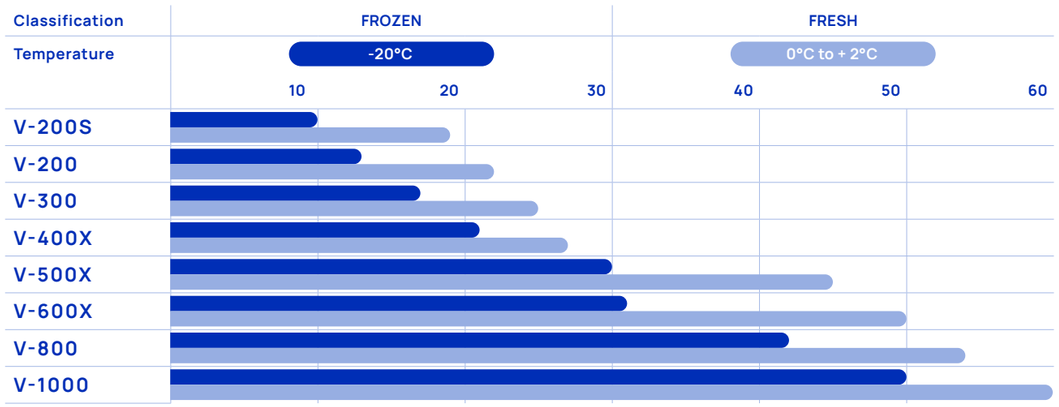
Capacity on engine power given at 2 400 rpm (ATP conditions)

MODEL		V-1000 SPECTRUM							
Evaporator		**ES600 MAX + ES600 MAX**		**ES600 MAX + ES150 MAX**		**ES600 MAX + 2 X ES150 MAX**		**ES800 MAX + ES300 MAX**	
PERFORMANCE									
Refrigeration capacity: at 30°C ambient									
Return air to evaporator	°C	-20°C		-20°C		-20°C		-20°C	
Capacity on engine power	W	5 230		4 620		5 040		4 840	
Capacity on electrical stand	W	4 700		4 450		4 620		4 620	
Refrigeration capacity: Individual Cooling Capacity									
Evaporator		**ES600 MAX**		**ES150 MAX**		**2 x ES150 MAX**		**ES800 MAX**	**ES300 MAX**
Return air to evaporator		0°C	-20°C	0°C	-20°C	0°C	-20°C	0°C	-20°C	0°C	-20°C
Capacity on engine power	W	8 510	4 370	4 000	2 300	5 760	3 130	8 390	4 660	4 600	2 330
Capacity on electrical stand	W	8 100	4 050	3 980	2 040	5 830	3 030	8 130	4 200	4 590	2 170
Heating capacity									
On the road	W	5 000							
Electric standby operation	W	5 000							
Airflow									
Evaporator		**ES600 MAX + ES600 MAX**		**ES600 MAX + ES150 MAX**		**ES600 MAX + 2 x ES150 MAX**		**ES800 MAX + ES300 MAX**	
On high speed engine operation	m³/h	2 491 x 2		2 491 + 1 396		2 491 + (2 x 1 396)		2 730 + 1 643	
TECHNICAL DATA									
Weight									
Condenser w/o electric standby	kg	96							
Condenser with electric standby	kg	205							
Evaporator ES800 MAX	kg	35							
Evaporator ES600 MAX	kg	28							
Evaporator 2 X ES150 MAX	kg	25							
Evaporator ES300 MAX	kg	18							
Evaporator ES150 MAX	kg	12.5							
Compressor									
Model		QP25							
Displacement	cc	250							
Number of cylinders		10							
Electric Standby Motor									
Voltage/phase/frequency		400/3/50 - 230/3/50 - 400/3/60 - 230/3/60							
Rating	kW	8.8							
Refrigerant									
Evaporator		**ES600 MAX + ES600 MAX**		**ES600 MAX + ES150 MAX**		**ES600 MAX + 2 x ES150 MAX**		**ES800 MAX + ES300 MAX**	
Refrigerant		R-404A / R452A							
Charge	kg	30: 5.9 50: 6.2							
Generic									
Controller		DSR III							
Defrost									
Defrost		Automatic hot gas defrost							

V and VX Unit selection guide

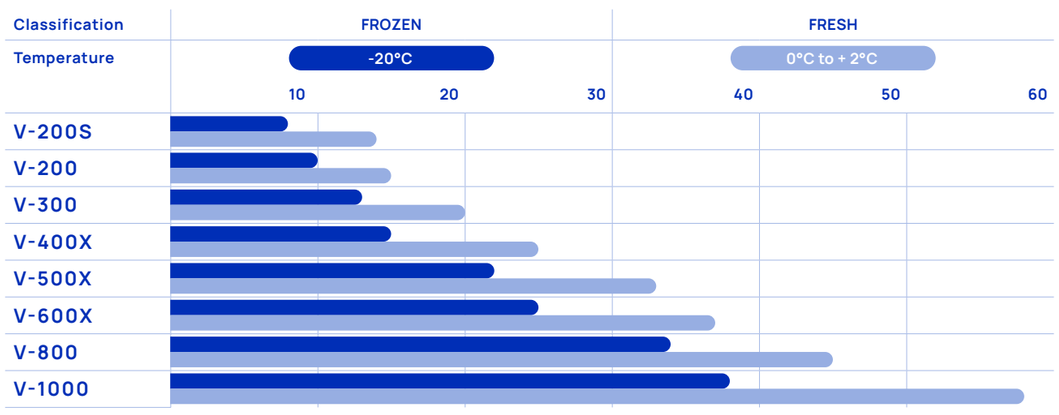
These tables are a guide to select the right unit that could match your application. These figures are maximum vehicle volumes, calculated in road operation, at 2400 rpm compressor speed and 30°C/40°C ambient temperature for single temperature and multi-temperature applications.

SINGLE TEMPERATURE (30°C AMBIENT)



	V-1000	V-800	V-600X	V-500X	V-400X	V-300	V-200	V200s	V-100
-20°C	50	42	31	30	21	17	13	10	8
0°C to + 2°C	60	54	50	45	27	25	22	19	16

SINGLE TEMPERATURE (40°C AMBIENT)

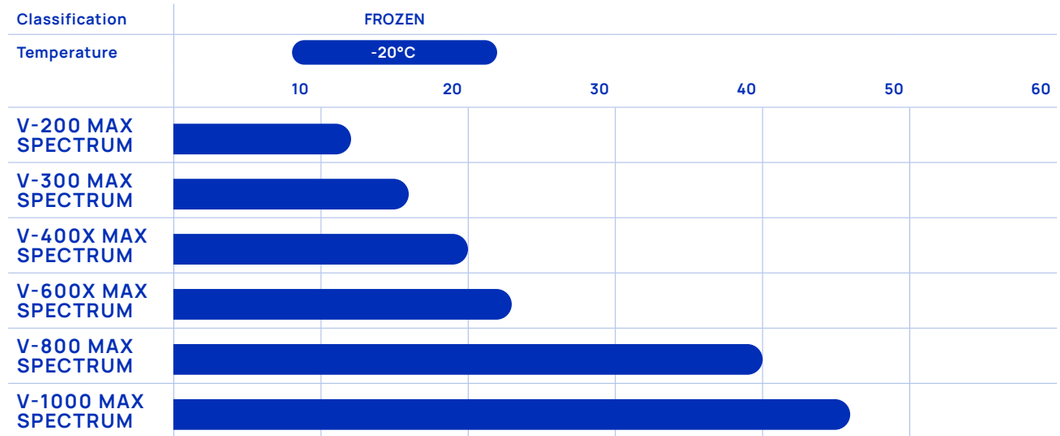


	V-1000	V-800	V-600X	V-500X	V-400X	V-300	V-200	V200s
-20°C	58	45	37	33	25	20	15	14
0°C to + 2°C	38	34	25	22	15	13	10	8

Recommendations are based on precooled loads and for distribution of 8 hours and are not a guarantee of performance as there are many variables to be considered. Speak to your local Thermo King dealer for complete information.

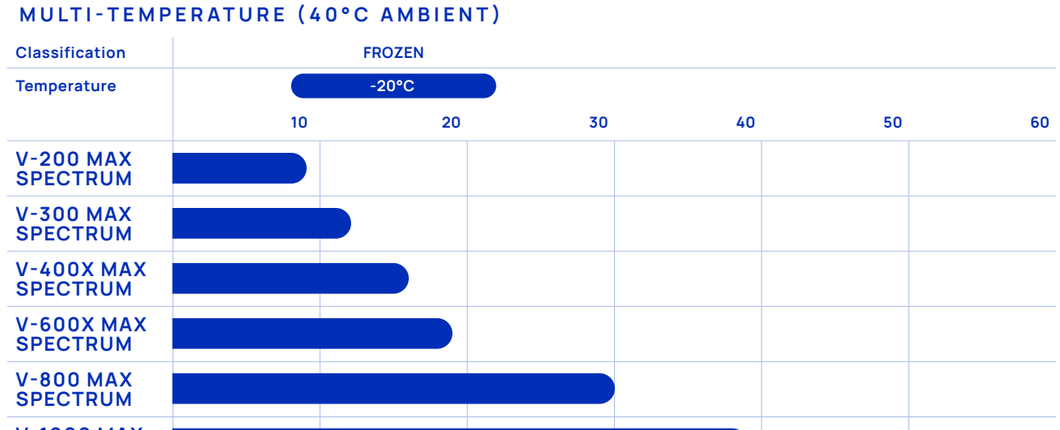
Parameters:
+0/2°C: 3 brief door openings per hour, k-factor 0.5W/m²K
-20°C: 2 brief door openings per hour, k-factor 0.35W/m²K

MULTI-TEMPERATURE (30°C AMBIENT)



	V-1000 MAX SPECTRUM	V-800 MAX SPECTRUM	V-600X MAX SPECTRUM	V-400X MAX SPECTRUM	V-300 MAX SPECTRUM	V-200 MAX SPECTRUM
-20°C	46	40	23	20	16	12

MULTI-TEMPERATURE (40°C AMBIENT)



	V-1000 MAX SPECTRUM	V-800 MAX SPECTRUM	V-600X MAX SPECTRUM	V-400X MAX SPECTRUM	V-300 MAX SPECTRUM	V-200 MAX SPECTRUM
-20°C	38	30	19	16	12	9

Recommendations are based on precooled loads and for distribution of 8 hours and are not a guarantee of performance as there are many variables to be considered. Recommendations for multi-temperature units are based on the following evaporator pairs: V-200 SP (ES100+ES100N), V-300 SP (ES150+ES150), V-400X SP (ES200+ES200), V-600X SP (ES300+ES300), V-800 SP (ES400+ES400), V-1000 (ES600+ES600. Speak to your local Thermo King dealer for complete information.

Upgrade your unit for enhanced performance

THERMOKARE

A complete selection of service contract solutions to manage maintenance costs and total life cost of a unit.

TOUCHLOG DATA CAPTURE

Temperature data capture and printing, approved to EN 12830, CE mark and IP-65 standards.

WINTRAC (DATA ANALYSIS SOFTWARE)

User-friendly software compatible with DSR controller for configuration file downloads.

USB DATALOGGER

Humidity, temperature and dewpoint recorder.

DATALOGGER JR

Programmable temperature recorder.

WLOG DATALOGGER

Wireless temperature monitoring and data logging solutions for transport refrigeration units.

DOOR SWITCHES

Reduce load temperature rise and save fuel when doors are opened.

DIN ADAPTER

The din adaptor box permits the adaption of the DSR controller to the vehicle dashboard. The aesthetically designed box allows the placement of the DSR controller in any available radio slot compartment in the driver cab.

HOSE COVERS

Full protection of hoses and cables on the road and full resistance under all climate adversities. Designed to seamlessly integrate into unit while complimenting the reefer and vehicle aesthetics while delivering exceptional durability. User-friendly installation (only for chassis installations, no vans).

MUFFLER KIT

Thermo King muffler eliminates the vibration and noise in the interior cab of small vehicles. The muffler is attached to the refrigeration system thus eliminating the vibration transfer from the unit to the driver cab enhancing user comfort and ease of use.

SNOW COVERS

Thermo King snow covers are designed to protect your unit against extreme climate conditions. The aerodynamically design snow cover prevents the buildup of snow and ice on the units fans which can lead to downtime and further maintenance costs resulting in longer running times for your unit.

HARNESS AND HOSE EXTENSIONS

The 2, 4 or 6 meter harness and hose extensions allows evaporators to be located to suit any customer needs with an extremely easy installation (plug and play connection with corresponding hose splice connectors) and provides full flexibility to position the evaporators especially in multi-temperature applications.

	MODELS	10	20	MAX 10	MAX 20	MAX 30	MAX 50
SINGLE TEMPERATURE	V-200	✓	✓	✓	✓	✓	✓
	V-300	✓	✓	✓	✓	✓	✓
	V-400X	✓	✓	✓	✓	✓	✓
	V-500X	✓	✓	✓	✓	✓	✓
	V-600X			✓	✓	✓	✓
	V-800	✓	✓	✓	✓	✓	✓
	V-1000	✓	✓	✓	✓	✓	✓
MULTI-TEMPERATURE	V-200 SP					✓	✓
	V-300 SP					✓	✓
	V-400X SP					✓	✓
	V-600X SP					✓	✓
	V-800 SP					✓	✓
	V-1000 SP					✓	✓
UNIT CONFIGURATION	**Unit Configuration**						
	Refrigerant	R-134a	R-134a	R-404a / R-452a	R-404a / R-452a	R-404a / R-452a	R-404a / R-452a
	Voltage	12V / 24V	12V / 24V	12V / 24V	12V / 24V	12V / 24V	12V / 24V
	Defrost (Hot gas)	●	●	●	●	●	●
	Standby	–	●	–	●	–	●
	Heating	–	–	–	–	●	●
	Power Pack	–	230V : 1PH 230V : 3PH 400V : 3PH (50/60 Hz)	–	230V : 1PH 230V : 3PH 400V : 3PH (50/60 Hz)	–	230V : 1PH 230V : 3PH 400V : 3PH (50/60 Hz)
UNIT OPTIONS	**Life Cost Management**						
	Thermokare Service Contracts	▲					
	Data Capture And Communications						
	Bluebox Lite	○					
	Tracking	○					
	Touchprint (Internal/External Mount)	○					
	Touchprint (Extended Harness)	○					
	Wintrac (Data Analysis Software)	▲					
	Customization						
	DIN Adapter	○	○	○	○	○	○
	Door Switch	○	○	○	○	○	○
	Hose Cover	○	○	○	○	○	○
	Condenser Fan Cover	○	○	○	○	○	○
	Condenser Installation Template	○	○	○	○	○	○
	Evaporator Installation Template	○	○	○	○	○	○
	Harness Extension TouchPrint 7m	○	○	○	○	○	○
	High Roof Installation Bracket Kit	○	○	○	○	○	○*
	Harness Extension 2m / 4m / 6m	–	–	–	○*	–	○*
	Hose Extension 2m / 4m / 6m	–	–		○*		○*
	Nose / Roof / Recessed Roof Kit	VX-Series ONLY					

● Standard Feature ○ Option: Factory Supplied ▲ Option: Dealer Supplied
○* Spectrum/Multi-Temp Units Only # Limited Model Option – Not Available

Direct Smart Reefer Controller



The Direct Smart Reefer (DSR) Controller brings state-of-the-art microprocessor-based intelligent control to Thermo King's vehicle powered product range.

KEY FEATURES

- Easy to use, even for new operators
- Flexible, modular design
- In-cab, user friendly control and monitoring
- Advanced control options

THE DSR IN-CAB DISPLAY

- User-friendly interface
- LED backlighting for clear display in all lighting
- Multiple application functions for optimal temperature and product integrity
- Intuitive alarm codes for quick troubleshooting

STANDARD FEATURES

- Continuous monitoring of load and unit
- Automatic restart after power loss
- Records mobile and stationary use
- Alerts minimize and prevent downtime
- Scheduled service notifications
- Manual or programmable automatic defrost
- Tamper-proofing by removing the in-cab control panel after presetting.
- Battery protection: low voltage monitoring and soft starts
- Delayed evaporator start after defrosts for load protection

THE DSR CONTROL BOARD

- Modular, separate control and power relay boards
- Enhanced reliability and serviceability
- Reduced maintenance costs

PROGRAMMABLE FEATURES

- Set point limits for temperature range
- Set point lock prevents undesired changes
- Alarm for out-of-range return air temperature
- Door switch on/off control maintains box temperature
- Wintrac software for in field parameter editing

MULTI-TEMPERATURE FEATURES

- Independent compartment control
- Independent compartment door switch evaporator control
- Adjustable set point range per compartment
- Optional single temperature mode

BlueBox Lite

Thermo King's vehicle-powered truck telematics solution for V- and VX-Series units.

Receive critical controller information along with temperature, position, and other crucial data in near real-time thanks to 4G connectivity and high logging frequency. Conveniently access the data via our cost-effective TracKing subscription.

The BlueBox Lite device does not require the installation of an additional data logger, as it's conveniently connected to your DSR controller. For compliance with the EN12830 European standard, just add the TouchLog data logger. Furthermore, it allows you to integrate the collected data from the vehicle-powered unit into any third-party website or back-end system.



FEATURES

- 4G network connectivity
- Direct connection to DSR controller or TouchLog data logger
- Quick and easy installation
- Data sharing with 3rd parties
- Temperature, position and machine data displayed on TracKing
- Compatible with TouchLog
- 2-year warranty
- 2-way set-point change capability

Dimensions

Evaporators



ES100 Ultra Slim
608 (l) x 490 (w) x 187 (h)



ES100N* Ultra Slim
461 (l) x 537 (w) x 189 (h)



ES150 MAX Ultra Slim
755 (l) x 540 (w) x 187 (h)



ES200 Ultra Slim
985 (l) x 525 (w) x 133 (h)



ES300/ ES300 MAX Ultra Slim
985 (l) x 551 (w) x 178 (h)



ES400 MAX
1080 (l) x 592 (w) x 236 (h)



ES500 Ultra Slim
1336 (l) x 596 (w) x 226 (h)



ES600 MAX
1330.5 (l) x 592 (w) x 240 (h)



ES800 Ultra Slim
1650 (l) x 592 (w) x 232 (h)



ES1000
1850 (l) x 664 (w) x 233 (h)

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.

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.



Peace of mind with Thermo King service contracts.

Keeping your V- and VX-Series equipped fleet on the road 24/7 takes a substantial amount of time and effort. Rely on Thermo King to help. Our customized service contracts empower fleet operators to select the exact services needed to maintain and improve their fleet utilization.

ROADSIDE ASSISTANCE

With every contract, you enjoy peace of mind with comprehensive breakdown call-out support and multilingual assistance.

RECOMMENDED CONTRACTS:

+ **FLEXIBLE SERVICE SUPPORT**
  From MaintenancePlus, which covers scheduled fleet maintenance, to the full service offered by ComfortPlus, Thermo King service contracts are tailored to your fleet's needs.

+ **EXTENDED WARRANTY**
  Increase your peace of mind by extending your warranty for your Thermo King refrigerated units.

+ **24/7 FLEET MONITORING SERVICE**
  Our experts monitor your fleet in real-time around the clock, responding to every issue and arranging solutions as soon as a problem is detected.

Performance-enhancing services & solutions



Don’t settle for less, when you can take it to the max. With a complete range of smart services and digital solutions, Thermo King helps you maximize uptime, sustainability, savings and control all throughout your operations. Keep your unit performance up, and your worries down. All day, every day.

+ **MAXIMIZE YOUR UPTIME**
  Avoid costly downtime and keep your units going and earning for longer.

+ **MAXIMIZE YOUR SUSTAINABILITY**
  Limit your fleet’s footprint and save smart on energy.

+ **MAXIMIZE YOUR SAVINGS**
  Reduce service and maintenance costs, and maximize your units’ residual value.

+ **MAXIMIZE YOUR CONTROL**
  Monitor and maintain critical cargo quality at every step of your journey.



Mix and max.

With a complete range of smart services and digital solutions, Thermo King helps you **maximize your uptime, sustainability, savings,** and **control** throughout your operations. From industry-leading telematics to customizable service agreements and performance-enhancing upgrades. **Explore the building blocks of our integrated portfolio right below.**

CONNECTED SOLUTIONS

Proactively **manage** your fleet and **monitor** your unit and cargo conditions from any location.

UPGRADES

Enhance fleet performance with a vast array of original Thermo King upgrades.

SERVICE CONTRACTS

Maximize **uptime** with quality maintenance, fast response times and 24/7 dealer support.

GENUINE PARTS

Avoid the costs of poor repairs and insist on **genuine replacement** and **re-manufactured parts**.

TAKE IT TO THE MAX WITH BLUEBOX LITE

BlueBox Lite gives you the data you need to make your operations smarter and more efficient.

A data recording device, standard embedded in your unit, registers information on your refrigeration unit in near realtime, thanks to **4G connectivity and high logging frequency.**

Once activated you will get information on **unit position, alarms, temperature, door opening and you will be able to re-set temperature** from afar.

Ask your dealer for more info on our activation and annual subscription plans.

Get your max at
europe.thermoking.com/max-your-cool

High performance, sustainable refrigeration with precise temperature control

- **SUSTAINABILITY BOOST**
  Low weight and an aerodynamic design help reduce your fuel consumption and environmental impact.With its extremely low emissions, noise, and vibrations, the VX-Series gives you access to ULEZs and LEZs day and night.

- **VERSATILE POWER SOURCES**
  Suitable for diesel, non-diesel, and battery pack applications, and flexible alternative power sources when the engine is off.

- **PRECISION COOLING**
  Extremely accurate set point temperature control within +/-1°C.



THERMO KING

Thermo King – by Trane Technologies (NYSE: TT), a global climate innovator – is a worldwide leader in sustainable transport climate control solutions. We engineer and provide cutting-edge technology and solutions with sustainability, reliability, and the customer experience in mind. Thermo King has provided transport temperature control solutions for various applications, including trailers, truck bodies, buses, air, shipboard containers, and railway cars since 1938.

For further information
europe.thermoking.com

Find your nearest dealer on
dealers.thermoking.com

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TRANE TECHNOLOGIES