

# V- and VX-Series

Flexible, powerful, dependable

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



# Content

<b>V- and VX-Series</b>	2
<b>Single or multi-temperature</b>	4
<b>V-Series for small trucks and vans</b>	6
Single temperature models specifications	9
Multi-temperature models specifications	10
<b>VX-Series for medium truck and vans</b>	12
Single temperature models specifications	14
Multi-temperature models specifications	15
<b>V-Series for large trucks</b>	16
<b>V-1000</b>	17
Single temperature models specifications	19
Multi-temperature models specifications	20
<b>V and VX Unit selection guide</b>	22
<b>Upgrades</b>	24
Enhance your unit performance	
<b>Direct Smart Reefer (DSR) Controller</b>	26
Intelligent and easy to use	
<b>BlueBox Lite</b>	27
Vehicle-powered telematics solution	
<b>Evaporator Dimensions</b>	28
<b>Thermo King service contracts</b>	29
Recommended contracts for extra peace of mind	
<b>Max Your Cool</b>	30
Performance-enhancing services & solutions	

## 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 m<sup>3</sup> fresh and 21 m<sup>3</sup> 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

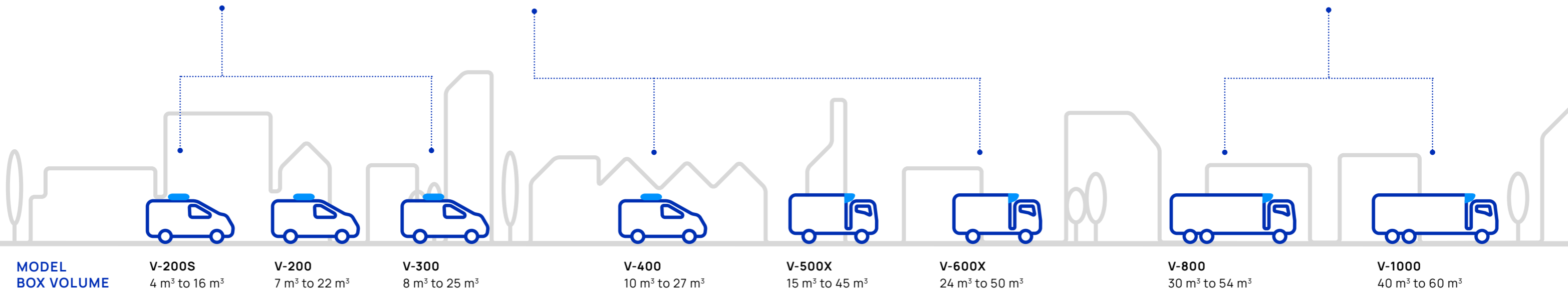
V-400X, V-500X and V-600X offer the optimal temperature control solution for single and multi-temperature vans and medium trucks up to 10 m<sup>3</sup> fresh and 50 m<sup>3</sup> frozen.

- 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 m<sup>3</sup> fresh and 60 m<sup>3</sup> 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.



# 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 m<sup>3</sup>.

## 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.

### 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

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

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

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

### 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.



## 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
<b>PERFORMANCE</b>						
<b>System net cooling capacity under ATP conditions including 30°C ambient, European standard</b>						
Return air to evaporator	°C	0°C	-20°C	0°C	-20°C	0°C
Air return/on the road	W	2240	970	2420	1210	2765
Electric stand-by 50 Hz	W	1910	780	1500	710	2400
<b>Heating capacity: at -18°C ambient/2400 rpm</b>						
On the road swash plate compressor	W	-	2200	2800	-	3100
Electric standby operation	W	-	1300	2050	-	2250
<b>Airflow</b>						
Airflow volume @ 0 pa static pressure	m³/h	2 x 1152	1 x 1150	2 x 1152	3 x 1152	3 x 1152
<b>TECHNICAL DATA</b>						
<b>Weight</b>						
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
<b>Compressor</b>						
Model		QP13	TK08N	QP13	QP15	QP15
Displacement	cc	131	82	131	146.7	146.7
Number of cylinders		6	6	6	6	6
<b>Electric Standby Motor</b>						
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)
<b>Refrigerant</b>						
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
<b>Generic</b>						
Controller		DSR III				
<b>Defrost</b>						
Defrost		Automatic hot gas defrost				



## Multi-temperature models specifications

MODELS		V-200 MAX SPECTRUM			
Evaporator		ES100 MAX + ES100 MAX		ES100 MAX + ES100N MAX*	
<b>PERFORMANCE</b>					
<b>Refrigeration capacity: at 30°C ambient</b>					
Return air to evaporator	°C	-20°C		-20°C	
Capacity on engine power	W	1480		1480	
Capacity on electrical stand	W	1110		1110	
<b>Refrigeration capacity: Individual Cooling Capacity</b>					
Evaporator		ES100 MAX		ES100N MAX*	
Return air to evaporator		0°C	-20°C	0°C	-20°C
Capacity on engine power	W	2370	1230	2260	1170
Capacity on electrical stand	W	2150	1040	2010	1010
<b>Heating capacity</b>					
On the road	W	2800			
Electric standby operation	W	2050			
<b>Airflow</b>					
Evaporator		ES100 MAX + ES100 MAX		ES100 MAX + ES100N MAX*	
On high speed engine operation	m³/h	695		695	
<b>TECHNICAL DATA</b>					
<b>Weight</b>					
Condenser w/o electric standby	kg	25			
Condenser with electric standby	kg	75			
Evaporator ES100 MAX	kg	9			
<b>Compressor</b>					
Model		QP 13			
Displacement	cc	131			
Number of cylinders		6			
<b>Electric Standby Motor</b>					
Voltage/phase/frequency		230/1/50 - 230/1/60 - 400/3/50 - 230/3/50 - 330/3/60			
Rating	kW	3.8			
<b>Refrigerant</b>					
Refrigerant		R-404A/R-452A			
Charge	kg	1.35			
<b>Generic</b>					
Controller		DSR III			
<b>Defrost</b>					
Defrost		Automatic hot gas defrost			

Capacity on engine power given at 2400 rpm (atp conditions)

\* ES100N only available upon special request. Please contact your local dealer.

MODELS		V-300 MAX SPECTRUM			
Evaporator		ES150 + ES150		ES150 + ES100	
<b>PERFORMANCE</b>					
<b>Refrigeration capacity: at 30°C ambient</b>					
Return air to evaporator	°C	-20°C		-20°C	
Capacity on engine power	W	1880		1760	
Capacity on electrical stand	W	1460		1220	
<b>Refrigeration capacity: Individual Cooling Capacity</b>					
Evaporator		ES150 MAX		ES100 MAX	
Return air to evaporator		0°C	-20°C	0°C	
Capacity on engine power	W	3080	1620	2410	
Capacity on electrical stand	W	2490	1350	2220	
<b>Heating capacity</b>					
On the road	W	3100			
Electric standby operation	W	2250			
<b>Airflow</b>					
Evaporator		ES150 MAX		ES100 MAX	
On high speed engine operation	m³/h	890		770	
<b>TECHNICAL DATA</b>					
<b>Weight</b>					
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			
<b>Compressor</b>					
Model		QP 15			
Displacement	cc	146.7			
Number of cylinders		6			
<b>Electric Standby Motor</b>					
Voltage/phase/frequency		230/1/50 - 230/1/60 - 400/3/50 - 230/3/50 - 330/3/60			
Rating	kW	3.8			
<b>Refrigerant Charge</b>					
Refrigerant		R-404A/R-452A			
Charge	kg	30: 1.55 - 50: 1.6			
<b>Generic</b>					
Controller		DSR III			
<b>Defrost</b>					
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 50m<sup>3</sup>.

### 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 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			
<b>PERFORMANCE</b>							
<b>Refrigeration capacity: at 30°C ambient atp conditions</b>							
<b>Setpoint</b>	°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
<b>Heating capacity: at -18°C ambient/2400 rpm</b>							
<b>Setpoint</b>	°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	
<b>Evaporator</b>		<b>ES300</b>	<b>ES500</b>	<b>ES600</b>			
Airflow volume	m³/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			
<b>TECHNICAL DATA</b>							
<b>Weight</b>							
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			
<b>Condenser</b>							
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)					
<b>Controller</b>							
DSR III Width x Depth x Height	mm	135 x 25 x 46					
<b>Compressor: max recommended speed 3000 rpm</b>							
Model		QP16					
Displacement	cc	163					
Number of cylinders		6					
<b>Electrical</b>							
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			
<b>Refrigerant</b>							
Charge R-134a	kg	1.8	2.1	-			
Charge R-452a – only MAX models	kg	2.0	2.0	2.3			
<b>Defrost</b>							
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		
<b>PERFORMANCE</b>									
<b>Refrigeration capacity: at 30°C ambient ATP conditions</b>									
<b>Setpoint</b>	°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			
<b>Refrigeration capacity: individual capacity</b>		<b>ES100</b>	<b>ES200</b>	<b>ES300</b>	<b>ES100N</b>	<b>ES150</b>	<b>ES300</b>	<b>2 x ES150</b>	<b>ES500</b>
<b>Setpoint</b>	°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
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
<b>Evaporator</b>									
Airflow volume	m³/h	866	1 241	1 420	566	891	2 x 891	1 420	2 353
<b>Heating capacity: at -18°C ambient</b>									
<b>Setpoint</b>	°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			
<b>TECHNICAL DATA</b>									
<b>Weight</b>									
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		
<b>Dimensions</b>									
Condenser (nose)	mm	1 253 (W) x 631 (D) x 276 (H)							
Condenser (roof)	mm	1 312 (W) x 825 (D) x 273 (H)							
<b>Controller</b>									
DSR III Width x Depth x Height	mm	135 x 25 x 46							
<b>Compressor: max recommended speed 3000 rpm</b>									
Model		QP16							
Displacement	cc	163							
Number of cylinders		6							
<b>Electrical</b>									
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	53	53
	24V DC (A)	30	25	30	25	30	30	30	30
<b>Refrigerant</b>									
Charge (R-452a)	kg	1.9	1.9	2.1	2.0	2.3	2.3	2.3	2.3
<b>Defrost</b>									
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 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<sup>3</sup>/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).

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.

**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<sub>2</sub> 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	V-800 MAX	V-1000	V-1000 MAX	V-1000 MAX
			10/20	30/50		10/20	30/50
<b>PERFORMANCE</b>							
Evaporator		ES800	ES800	ES800	ES1000	ES1000	ES1000
<b>Refrigeration capacity: at 30 °C ambient</b>							
Return air to evaporator	°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
Capacity on electric standby 400v/3ph/50hz (r-452a)	w	5 030	-	7 130	3 690	6 860	3 610
<b>Heating capacity: at -18 °C ambient/2 400 rpm</b>							
On the road swash plate compressor	W	-		3 600		-	8 000
Electric standby operation	W	-		3 120		-	8 000
<b>Airflow</b>							
Airflow volume @ 0 pa static pressure	m <sup>3</sup> /h		2 680			3 537	
<b>TECHNICAL DATA</b>							
<b>Weight</b>							
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	
<b>Compressor</b>							
Model			QP21			QP25	
Displacement	cc		215			250	
Number of cylinders			10			10	
<b>Electric Standby Motor</b>							
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)	
<b>Refrigerant</b>							
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
<b>Generic</b>							
Controller						DSR III	
<b>Defrost</b>							
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				
<b>PERFORMANCE</b>									
<b>Refrigeration capacity: at 30°C ambient</b>									
Return air to evaporator	°C	-20°C	-20°C	-20°C	-20°C	-20°C	-20°C	-20°C	-20°C
Capacity on engine power	W	4 140	3 900	3 900	3 900	4 070	4 070	4 070	4 070
Capacity on electrical stand	W	3 520	3 380	3 380	3 380	3 370	3 370	3 370	3 370
<b>Refrigeration capacity: Individual Cooling Capacity</b>									
Evaporator	ES400 MAX		ES600 MAX		ES150 MAX		2 X ES150 MAX		
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	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	5 640 2 995	5 640 2 995	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	5 045 2 705	5 045 2 705	5 045 2 705	
<b>Heating capacity</b>									
On the road	W	4 500							
Electric standby operation	W	4 000							
<b>Airflow</b>									
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)	2 260 + (2 x 890)	2 260 + (2 x 890)	2 260 + (2 x 890)	2 260 + (2 x 890)	
<b>TECHNICAL DATA</b>									
<b>Weight</b>									
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							
<b>Compressor</b>									
Model		QP21							
Displacement	cc	215							
Number of cylinders		10							
<b>Electric Standby Motor</b>									
Voltage/phase/frequency		400/3/50 - 230/3/50 - 400/3/60 - 230/3/60							
Rating	kW	8.2 (400/3/50)							
<b>Refrigerant Charge</b>									
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	5.0	5.15	5.15	5.15	5.15	
<b>Generic</b>									
Controller		DSR III							
<b>Defrost</b>									
Defrost		Automatic hot gas defrost							

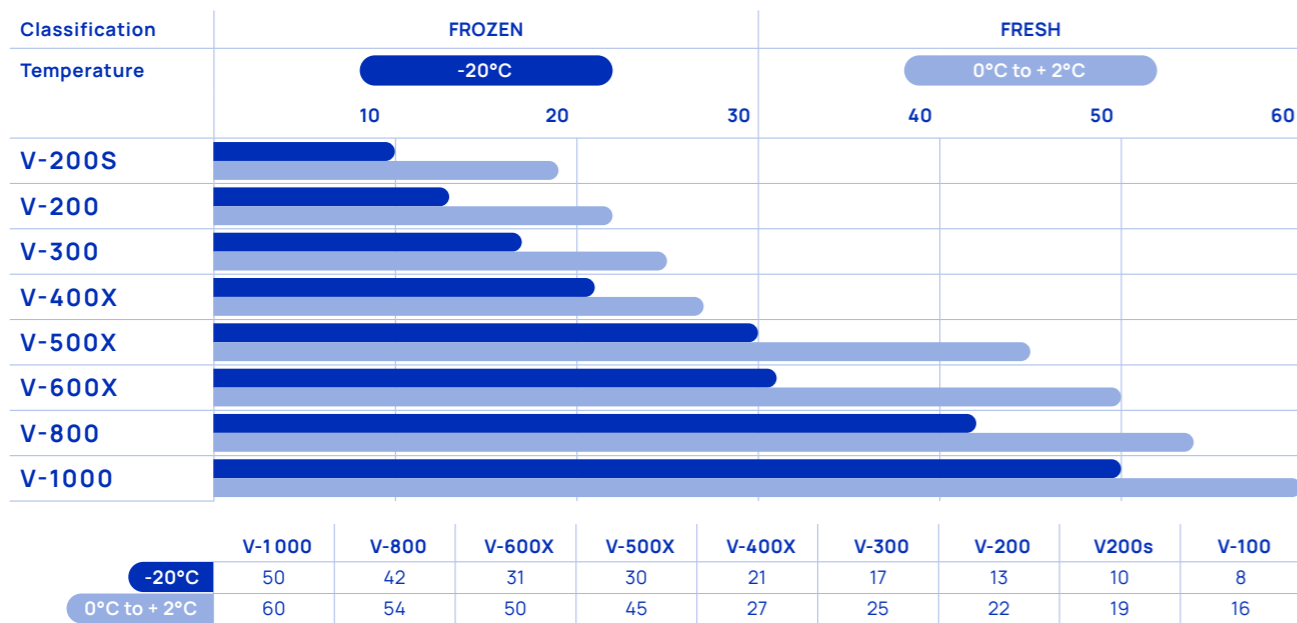
Capacity on engine power given at 2 400 rpm (ATP conditions)

MODEL	V-1000 SPECTRUM									
Evaporator	ES600 MAX + ES600 MAX		ES600 MAX + ES150 MAX		ES600 MAX + 2 X ES150 MAX		ES800 MAX + ES300 MAX			
<b>PERFORMANCE</b>										
<b>Refrigeration capacity: at 30°C ambient</b>										
Return air to evaporator	°C	-20°C	-20°C	-20°C	-20°C	-20°C	-20°C	-20°C	-20°C	-20°C
Capacity on engine power	W	5 230	4 620	4 620	5 040	4 840	4 840	4 840	4 840	4 840
Capacity on electrical stand	W	4 700	4 450	4 450	4 620	4 620	4 620	4 620	4 620	4 620
<b>Refrigeration capacity: Individual Cooling Capacity</b>										
Evaporator	ES600 MAX		ES150 MAX		2 x ES150 MAX		ES800 MAX		ES300 MAX	
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	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	4 600 2 330	4 600 2 330	4 600 2 330	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	4 590 2 170	4 590 2 170	4 590 2 170	4 590 2 170
<b>Heating capacity</b>										
On the road	W	5 000								
Electric standby operation	W	5 000								
<b>Airflow</b>										
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 + 1 396	2 491 + (2 x 1 396)	2 730 + 1 643	2 730 + 1 643	2 730 + 1 643	2 730 + 1 643	2 730 + 1 643
<b>TECHNICAL DATA</b>										
<b>Weight</b>										
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								
<b>Compressor</b>										
Model		QP25								
Displacement	cc	250								
Number of cylinders		10								
<b>Electric Standby Motor</b>										
Voltage/phase/frequency		400/3/50 - 230/3/50 - 400/3/60 - 230/3/60								
Rating	kW	8.8								
<b>Refrigerant</b>										
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								
<b>Generic</b>										
Controller		DSR III								
<b>Defrost</b>										
Defrost		Automatic hot gas defrost								

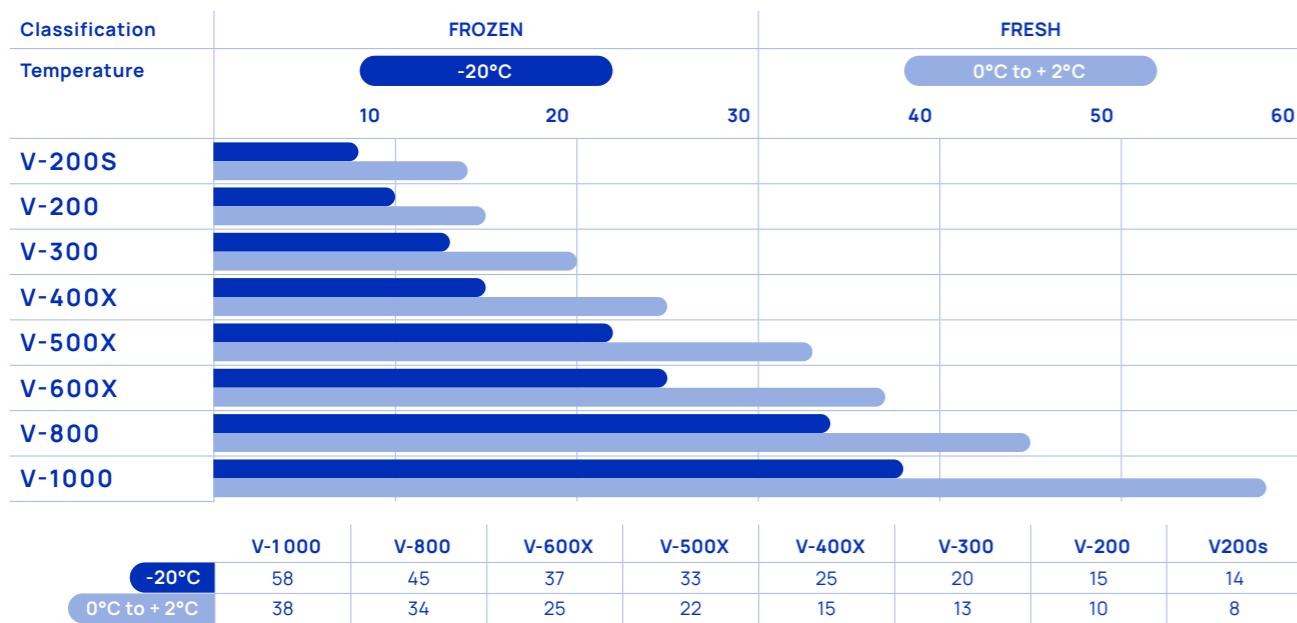
# V and VX Unit selection guide

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 (3°C AMBIENT)



## SINGLE TEMPERATURE (40°C AMBIENT)



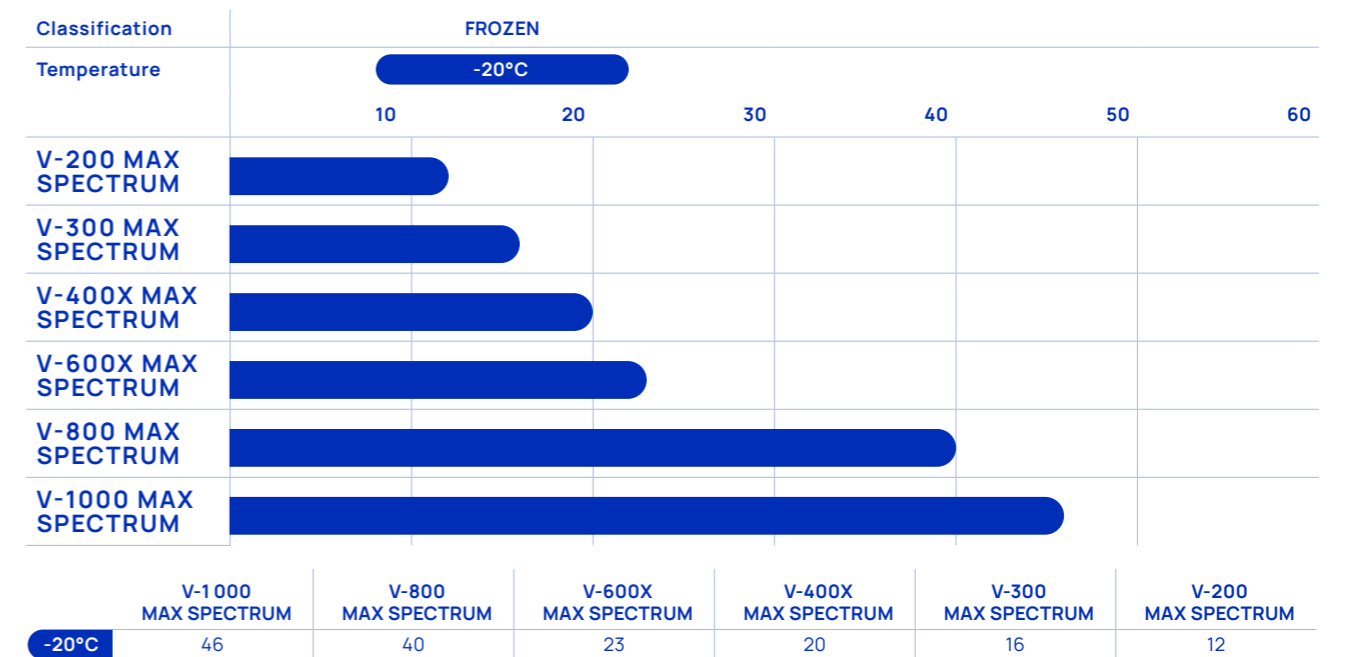
Recommendations are based on precooled loads and for distribution of 8 hours and are not a guarantee of performance as there are many variables to be considered. Speak to your local Thermo King dealer for complete information.

Parameters:

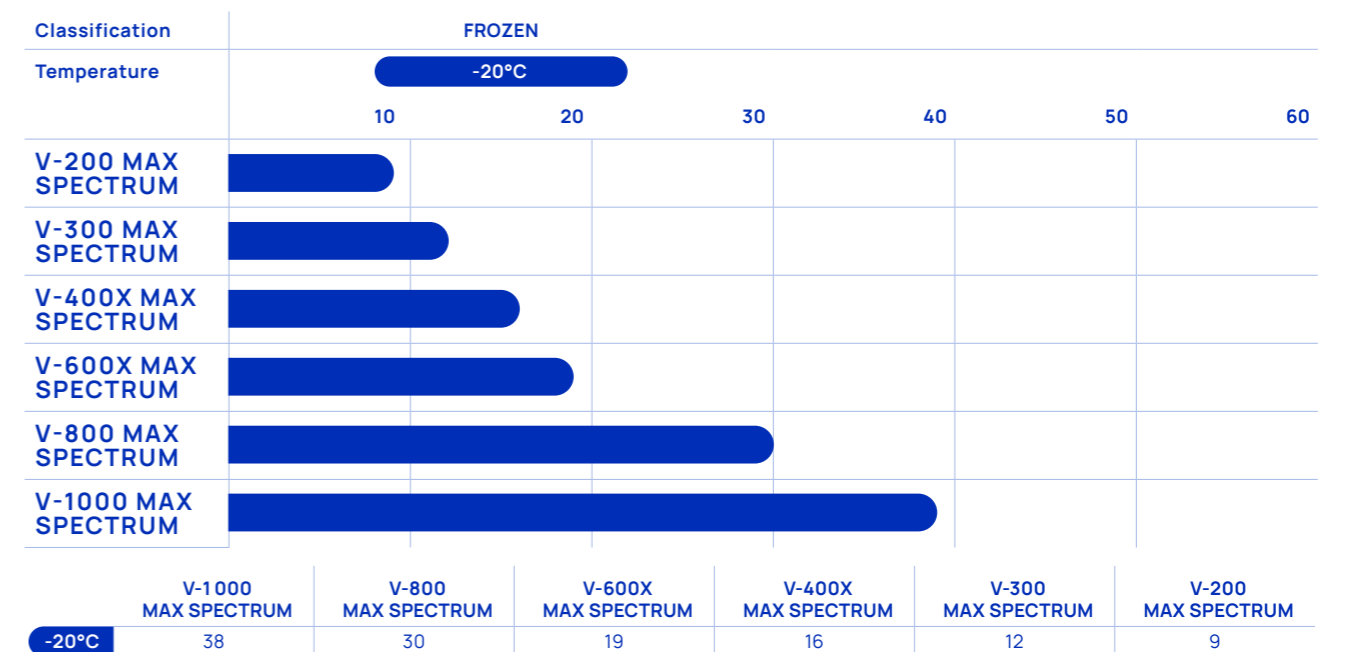
+0/2°C: 3 brief door openings per hour, k-factor 0.5W/m²K

-20°C: 2 brief door openings per hour, k-factor 0.35W/m²K

## MULTI-TEMPERATURE (30°C AMBIENT)



## MULTI-TEMPERATURE (40°C AMBIENT)



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.

## HARNES 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					✓	✓	
<b>Unit Configuration</b>								
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)	
<b>Life Cost Management</b>								
	Thermokare Service Contracts						▲	
<b>Data Capture And Communications</b>								
	Bluebox Lite						○	
	Tracking						○	
	Touchprint (Internal/External Mount)						○	
	Touchprint (Extended Harness)						○	
	Wintrac (Data Analysis Software)						▲	
<b>Customization</b>								
UNIT OPTIONS	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 TrackKing 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
- Temperature, position and machine data displayed on TrackKing
- Direct connection to DSR controller or TouchLog data logger
- Compatible with TouchLog
- Quick and easy installation
- 2-year warranty
- Data sharing with 3rd parties
- 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.

### 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.



### ROADSIDE ASSISTANCE

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

# 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](http://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 – 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](http://europe.thermoking.com)

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

