

## V-SERIES

flexible, powerful, dependable

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

TRANE

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# **V-Series**

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COLUMN STATE

## SUPERIOR NON-DIESEL TEMPERATURE CONTROL FOR VANS AND SMALL TRUCKS

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.



## V-Series - flexible, powerful, dependable

Thermo King V-Series comprises six models which offer a direct drive, non-diesel temperature control solution for operators of small, medium and large trucks from 5 m<sup>3</sup> to 54 m<sup>3</sup>, fresh and frozen.

## Total load protection with low operating costs.

The V-Series is a range of high performance, high efficiency units delivering effective temperature control with low cost of ownership.

## Direct Smart Reefer technology puts you in control.

The advanced and user-friendly Direct Smart Reefer controller gives you complete control of your V-Series unit from the comfort and safety of the cab. Key data is simply presented so that operating errors can be minimised.



## R-452A as standard - advanced, efficient, green

The latest low Global Warming Potential refrigerant is available without compromising performance. Your environmental impact will be reduced and your customers will know that you care.

## 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.

## 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.

## No matter your business, we have a system to suit.

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, roof mount or front mount, single or multi-temperature, fresh or frozen.

## 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<sup>™</sup> 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 you wish. In addition, temperature pulldown will be up to 40% faster.

## Single or multi-temperature a solution for every need

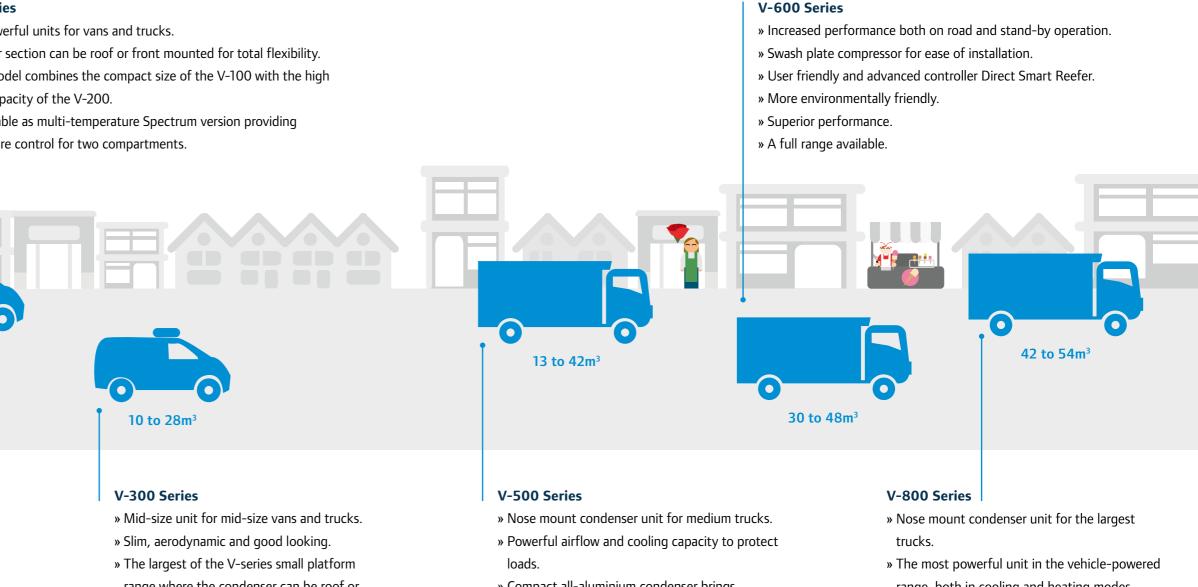
The V-100, 200 and 300 Series offer the optimal temperature control solution for single and multi-temperature vans and small trucks up to 28 m<sup>3</sup>. This complete range shares many common components and has many modular options to fulfil the requirements of every customer. By using the vehicle engine to drive the compressor, noise and emissions are minimised.

### V-200 Series

9 to 22m<sup>3</sup>

- » Small, powerful units for vans and trucks.
- » Condenser section can be roof or front mounted for total flexibility.
- » V-200s model combines the compact size of the V-100 with the high cooling capacity of the V-200.
- » Also available as multi-temperature Spectrum version providing temperature control for two compartments.

The V-500, 600 and 800 Series offer a direct drive, non-diesel temperature control solution for operators of trucks up to 54m<sup>3</sup>. For multi-temperature applications, the V-500 and 800 Spectrum models are available. The range has minimal environmental impact as the refrigeration unit compressor is driven by the vehicle engine, offering exceptionally low noise and low emissions.



» Condenser section can be roof or front mounted. » Extremely compact design to blend with small

» Smallest of the series, but with big unit

» Slim, aerodynamic and good looking.

- vehicle body shapes. » Compactness.

5 to 16m<sup>3</sup>

V-100 Series

performance.

» Low weight.

- range where the condenser can be roof or front mounted.
- » Also available as multi-temperature Spectrum version providing temperature control for two compartments.

- » Compact all-aluminium condenser brings significant lifecycle benefits.
- » Also available as multi-temperature Spectrum version providing temperature control for two compartments.

- range, both in cooling and heating modes.
- » An unbeatable non-diesel, low noise and low weight solution.
- » Also available as multi-temperature Spectrum version providing temperature control for two compartments.

## **Direct Smart Reefer (DSR) Controller**

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

### **Key features**

- » Ease of use
- » Flexible, modular and stylish
- » Designed for error-free control and monitoring of the refrigeration unit from inside the cab
- » Advanced control features.

### The DSR in-cab display

The DSR in-cab unit provides the ideal user interface. LCD technology with LED backlighting makes the screen easy to read in all light conditions. The operator can select from multiple functions to suit specific transport applications, ensure optimal temperature control and product integrity. In the event of a malfunction, an easily interpreted alarm code allows drivers to take rapid and appropriate remedial action.

### Standard features

- » Continuous monitoring of load and temperature control unit.
- » Automatic start-up in case of a power interruption on the road or in standby.
- » A full record via three hour meters of compressor and unit operating hours.
- » Simple alarm codes with clear descriptions for quick diagnosis and reduced maintenance costs.
- » Maintenance reminders to encourage preventative maintenance and reduce downtime.
- » Manual or automatic defrost to schedule defrost initiation and termination to suit the application.
- » Tamper-proofing by removing the in-cab control panel after presetting.
- » Vehicle battery protection with low voltage monitoring, sequential evaporator starts and "soft starting" during unit power-up to avoid power "spikes".
- » Compressor protection with the optional "soft start" feature to increase engine compressor life.
- » Load protection by delaying evaporator start-up after defrosts, to avoid accidental water discharge into the load space.

### The DSR control board

- » A modular concept that separates control and power relay boards.
- » Improved reliability, serviceability and componentreplacement.
- » Lower service and maintenance costs.

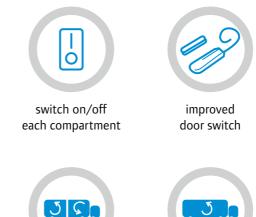


### **Programmable features**

- » Set point limits for optimum temperature range selection.
- » Set point lock to prevent the driver modifying a predetermined temperature.
- » On-screen alarm when return air temperature is out of range.
- » Door switches to shut down the unit each time the door is opened, to maintain the box temperature and protect the load.
- » Wintrac Windows-based software package for configuration parameter editing in the field.

### **Multi-temperature features**

- » Each compartment can be switched on/off independently.
- » Improved door switch functionality allows each evaporator to be controlled independently so that only the compartment with the door open is turned off.
- » Set point range can be independently adjusted for each compartment.
- » Operation in single temperature mode for increased flexibility.





adjustable set point range for each compartment single temp if required Alex Brown, Retailer Delivers fresh fruit and vegetables

"In my job, making mistakes just isn't an option. The DSR controller lets me know exactly what's going on and even warns me if there's a problem. And the information is right where I need it, in the cab. Although it's a very smart device, I find it really easy to use."

Information, in-cab: **In control.** 

## Tune your unit - features and options

	V-100 V-100 MAX V-200s MAX	V-200 10 V-200 MAX 10/30 V-200 MAX 30 SPECTRUM	V-300 10 V-300 MAX 10/30 V-300 MAX 30 SPECTRUM	V-200 20 V-200 MAX 20/50 V-200 MAX 50 SPECTRUM	V-300 20 V-300 MAX 20/50 V-300 MAX 50 SPECTRUM
LIFE COST MANAGEMENT					
ThermoKare service contracts					
DATA CAPTURE AND COMMUNICATIONS					
TouchPrint data capture					
Wintrac (data analysis software)					
USB Datalogger				<b></b>	
Datalogger Jr				<b></b>	
LOAD PROTECTION					
Door switch	Δ			Δ	Δ
Din adapter	Δ			Δ	Δ
Hose cover	Δ	Δ	Δ	Δ	Δ
Muffler kit	Δ	Δ	Δ	Δ	Δ
Snow cover (also called kit deflector small)	Δ	Δ	Δ	0	0
Snow cover (also called kit deflector big)	0	0	0	Δ	Δ
Harness extension 2 m/4 m/6 m	Δ	Δ	Δ	Δ	Δ
Hose extension 2 m/4 m/6 m	Δ	Δ	Δ	Δ	Δ

O Not available  $\bullet$  Standard feature  $\triangle$  Option: factory installed  $\blacktriangle$  Option: dealer supplied

#### ThermoKare

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

#### TouchPrint data capture

- » User-friendly temperature recorders.
- » Delivery and journey printouts at the touch of a button.
- » 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.

#### **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.

V-500 V-500 MAX V-600 MAX	V-500 MAX SPECTRUM	V-800 V-800 MAX	V-80 SPE
		Δ	
Δ	Δ	Δ	
Δ	Δ	Δ	
Δ	Δ	Δ	
0	0	0	
0	0	0	
0	Δ	0	
0		0	

#### Hose covers

Full protection of hoses and cables on the road and full resistance under all climate adversities. Designed with best aesthetics to promote brand image and with an exceptional durability. User-friendly installation (only for chassis installations, no vans.).

00 MAX

 $\triangle$ 

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#### 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

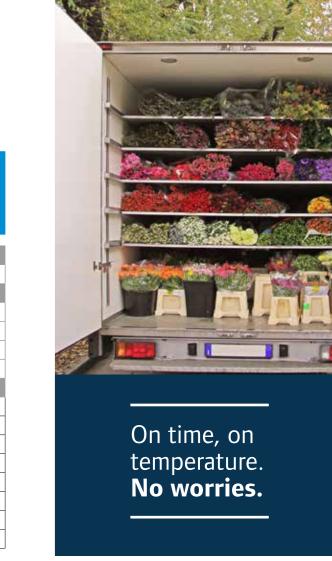
Thermo King snow covers are designed to protect your unit against extreme climate conditions. The aerodynamically design snow cover prevents the buildup of snow and ice on the units fans which can lead to downtime and further maintenance costs resulting in longer running times for your unit.

#### Harness extension

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

#### **Hose extension**

The 2, 4 or 6 meter hose extensions (includes corresponding splice connectors) are also on offer as option for remote evaporators.



## Unit selection guide

The table below indicates 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.

		AMBIENT TE	MPERATURE				
	30°	°C	40°C				
MODEL		BOX TEM	PERATURE				
	+0/2°C	-20°C	+0/2°C	-20°C			
V-100	12 m <sup>3</sup>	5 m <sup>3</sup>	8 m <sup>3</sup>	4 m <sup>3</sup>			
V-100 MAX	16 m <sup>3</sup>	8 m <sup>3</sup>	11 m <sup>3</sup>	6 m³			
V-200	18 m <sup>3</sup>	9 m³	13 m <sup>3</sup>	7 m <sup>3</sup>			
V-200s MAX	19 m <sup>3</sup>	10 m <sup>3</sup>	14 m <sup>3</sup>	8 m <sup>3</sup>			
V-200 MAX	22 m <sup>3</sup>	13 m <sup>3</sup>	15 m <sup>3</sup>	10 m <sup>3</sup>			
V-300	25 m <sup>3</sup>	10 m <sup>3</sup>	18 m <sup>3</sup>	8 m <sup>3</sup>			
V-300 MAX	28 m <sup>3</sup>	17 m <sup>3</sup>	20 m <sup>3</sup>	13 m <sup>3</sup>			
V-200 MAX Spectrum	-	12 m <sup>3</sup>	-	9 m <sup>3</sup>			
V-300 MAX Spectrum	-	16 m <sup>3</sup>	-	12 m <sup>3</sup>			
V-500	30 m <sup>3</sup>	13 m <sup>3</sup>	21 m <sup>3</sup>	10 m <sup>3</sup>			
V-500 MAX	42 m <sup>3</sup>	25 m <sup>3</sup>	29 m <sup>3</sup>	19 m <sup>3</sup>			
V-500 MAX Spectrum	-	22 m <sup>3</sup>	-	17 m <sup>3</sup>			
V-600 MAX	48 m <sup>3</sup>	30 m <sup>3</sup>	34 m <sup>3</sup>	24 m <sup>3</sup>			
V-800 MAX Spectrum	-	40 m <sup>3</sup>	-	30 m <sup>3</sup>			
V-800	44 m <sup>3</sup>	-	31 m <sup>3</sup>	-			
V-800 MAX	54 m <sup>3</sup>	42 m <sup>3</sup>	38 m³	34 m <sup>3</sup>			

Recommendations are based on precooled loads and K value of 0.35 W/m<sup>2</sup>K is used for frozen goods (-20°C) and 0.5 W/m<sup>2</sup>K for fresh goods (+0/2°C), for a distribution of 8 hours. Recommendation for V-500 MAX Spectrum unit is based on ES300+ES300 configuration, and ES400+ES400 for V-800 MAX Spectrum unit. Recommendations are not a guarantee of performance as there are many variables to be considered. See your Thermo King dealer for complete information.



Home delivery

"Load space is critical when you run a small delivery van. My V-Series evaporator is so slim, it lets me use the whole compartment. They say time is money – but so is space."

Freshness assured with **V-Series** 

MODEL	REFRIGERANT	SMALL PLATFORM	MEDIUM PLATFORM	LARGE PLATFORM	- Z-	HEATING	ر Multi-tem
	NEFRIGERANT		FLAIFURIN		STANDDT	ΠΕΑΠΙΝΟ	
V-100 10	R-134a	1	-	-	-	-	-
V-100 20	R-134a	1	-	-	1	-	-
V-100 MAX 10	R-404A /R-452A	1	-	-	-	-	-
V-100 MAX 20	R-404A /R-452A	1	-	-	1	-	-
V-100 MAX 30	R-404A /R-452A	1	-	-	_	1	-
V-100 MAX 50	R-404A /R-452A	1	-	-	1	1	-
V-200 10	R-134a	1	-	-	-	-	-
V-200 20	R-134a	-	1	-	1	-	-
V-200s MAX 20	R-404A /R-452A	1	-	-	1	-	-
V-200s MAX 50	R-404A /R-452A	1	-	-	1	1	-
V-200 MAX 10	R-404A /R-452A	1	-	-	-	-	-
V-200 MAX 20	R-404A /R-452A	-	1	-	1	-	-
V-200 MAX 30	R-404A /R-452A	1	-	-	-	1	-
V-200 MAX 50	R-404A /R-452A	-	1	-	1	1	-
V-200 MAX 30 Spectrum**	R-404A /R-452A	1	-	-	-	1	1
V-200 MAX 50 Spectrum**	R-404A /R-452A	_	1	-	1	1	1
V-300 10	R-134a	1	-	-	-	-	-
V-300 20	R-134a	-	1	-	1	-	-
V-300 MAX 10	R-404A /R-452A	1	-	-	-	-	-
V-300 MAX 20	R-404A /R-452A	-	1	-	1	-	-
V-300 MAX 30	R-404A /R-452A	1	-	-	-	1	-
V-300 MAX 50	R-404A /R-452A	-	1	-	1	1	-
V-300 MAX 30 Spectrum*	R-404A /R-452A	1	-	-	-	1	1
V-300 MAX 50 Spectrum*	R-404A /R-452A	-	1	-	1	1	1
V-500 10	R-134a	-	_	1	-	-	-
V-500 20	R-134a	-	-	1	1	-	-
V-500 MAX 10	R-404A/R-452A	-	-	1	-	-	-
V-500 MAX 20	R-404A/R-452A	-	-	1	1	-	-
V-500 MAX 30	R-404A/R-452A	-	-	1	-	1	-
V-500 MAX 50	R-404A/R-452A	-	-	1	1	1	-
V-500 MAX 30 Spectrum <sup>1</sup>	R-404A/R-452A	-	-	1	-	1	1
V-500 MAX 50 Spectrum <sup>1</sup>	R-404A/R-452A	-	-	1	1	1	1
V-600 MAX 10	R-404A/R-452A	-	-	1	-	-	-
V-600 MAX20	R-404A/R-452A	-	-	1	1	-	-
V-600 MAX 30	R-404A/R-452A	-	_	1	_	1	-
V-600 MAX 50	R-404A/R-452A	_	_	1	1	1	-
V-800 10	R-134a	_	_	1	_	_	-
V-800 20	R-134a	_	_	1	1	_	_
V-800 MAX 10	R-404A/R-452A	_	_	1	_	_	_
V-800 MAX 20	R-404A/R-452A	-	_	1	1	-	-
V-800 MAX 30	R-404A/R-452A	-	_	1	_	1	_
V-800 MAX 50	R-404A/R-452A	-	_	-	1	1	-
V-800 MAX 50 Spectrum <sup>2</sup>	R-404A/R-452A	_	_	/	✓	1	1

Included – Not included – \* Available in the following configurations: ES150+ES150 / ES150-ES100 / ES100+ES100 \*\* Available in the following configurations: ES100 + ES100 – (1) Available in the following configurations: ES300+ES300, ES300+ES150 and ES300+2xES150 (2) Available in the following configurations: ES400+ES400, ES600+ES150 and ES600+2xES150

# Single temperature models specifications

		V-1	00		V-100 MAX		V-200		V-200s MAX		200 AX	V-300		V-300 MAX	
SYSTEM NET COOLING CAPACITY UNDER ATP CONDITIONS INCLUDING 30°C AMBIENT, EUROPEAN ST									AN ST		RD				
	°C	0°C	-20°C	0°C	-20°C		-20°C		-20°C		-20°C			1 1	
Air return/on the road	W	1665	680	2080	1090	2255	945	2400	1175	2770	1460	2965	1260	3330	1840
Electric stand-by 50 Hz	W	975	390	1260	695	1850	685	1450	660	1970	1130	2090	865	2840	1235
HEATING CAPACITY: AT -18°	C AMBI	ENT/2	400 F	RPM							1	1			
On the road swash plate compressor	w	-		19	00	-		22	00	28	00	-	-	31	00
Electric standby operation	W	-		11	00	-		13	00	20	50		-	22	50
AIRFLOW															
Airflow volume @ 0 pa static pressure	m³/h	1 x (	580	1 x	680	2 x 1	152	1 x 1	150	2 x 1	1152	3 x 1	152	3 x 1	152
WEIGHT															
Condenser w/o electric standby	kg	2	5	2	5	2	5	2	5	25		25		25	
Condenser with electric standby	kg	4	3	7	0	7	0	43		72		70		72	
Evaporator	kg	g	)	ç	Ð	15		14		15		18		18	
Swash plate compressor	kg	6.	5	6.	.5	6.9		6.5		6.9		6.8		6.8	
COMPRESSOR															
Model		QPC	)8N	QPO	08N	QP13		QP08N		QP13		QP15		QP15	
Displacement	сс	8	2	8	2	13	81	82		131		146.7		14	5.7
Number of cylinders		E	5	e	5	e	5	6		6		6		6	
ELECTRIC STANDBY MOTOR															
Voltage/phase/frequency		230/1	/150	230/	1/50	230/ 400/ 230/	30/1/50 30/1/60 00/3/50 230/1/50 30/3/50 30/3/60		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/ 230/ 400/ 230/ 230/	1/60 3/50 3/50
Rating	kW	1.	6	1.	.6	3. (400/		1	.6		.8 '3/50)		.7 3/50)	3. (400/	
REFRIGERANT CHARGE															
Charge	kg	10: ( 20:		10/30 20:1 -	): 0.62 50: 1.2	10/30 20/50	): 1.1 ): 1.35	1.	.2		0: 1.0 0: 1.2	10: 20:	1.1 1.35	10/30 20/50	0: 1.1 ): 1.35
GENERIC	·														
Refrigerant		R-1	34a	R-40 R-4	)4A/ 52A	R-1	34a	R-404A/ R-452A		R-404A/ R-452A		R-1	34a	R-40 R-4	
Controller		DSF	RIII	DSF	R III	DSF	R III	DSR III		DSR III		DSR III		DSF	RIII
DEFROST															
Defrost					Au	ıtomatio	: hot ga	is defro	st/Reve	erse cyc	le				

		V-500		V-500 MAX		V-600 MAX		V-800		V-800	) MAX
REFRIGERATION CAPACITY: A	T 30°C A	MBIENT									
	°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	3915	1655	4865	2515	5910	3280	5175	-	7790	4160
Electric standby 50 Hz	w	3160	1090	4115	1915	4970	2550	4920	-	7030	3795
HEATING CAPACITY: AT -18°C AM	BIENT/24	DO RPM		1	1	ľ		I		I	
On the road swash plate compressor	w	-	-	36	00	40	00		-	70	30
Electric standby operation	W	-	-	31	20	32	00		-	64	50
AIRFLOW											
Airflow volume @ 0 pa static pressure WEIGHT	m³/h	3 x 680 3 x 680 3 x 1152		26	580	26	80				
Condenser w/o electric standby	kg	53		5	3	5	3	10	00	100	
Condenser with electric standby	kg	12	25	125		125		160		160	
Evaporator	kg	25.5		25	25.5		28		35		5
Swash plate compressor	kg	7.	.1	7.1		7.1		8.5		8.5	
COMPRESSOR				1							
Model		QP	16	QP16		QP16		QP21		QF	21
Displacement	сс	16	53	163		163		215		215	
Number of cylinders		e	5	6		6		10		10	
ELECTRIC STANDBY MOTOR						,					
Voltage/phase/frequency				380/ 230/ 230/ 230/	3/50 /3/60 /3/50 /3/60 /1/50 /1/50 /1/60		400/ 230/				
Rating	kW	6. (400/		1	.4 '3/50)		.4 '3/50)		.2 ′3/50)	-	.2 '3/50)
REFRIGERANT CHARGE											
Charge	kg	10: 20:			2.1 .2 50:2.3		:2.2 .3 50:2.4		4.55 4.85		0:4.7 50:5
GENERIC											
Refrigerant		R-1	34a		)4A/ 52A	R-404A/ R-452A		R-134a			)4A/ 52A
Controller DEFROST		DSR III DSR III DSR III					R III	II DSR III DSR III			
Defrost				Auto	matic hot	gas defros	t/Reverse	cycle			

# Multi-temperature models specifications

### V-200 MAX SPECTRUM

REFRIGERATION CAPACITY: AT 30	°C AM	BIENT								
		ES100 MAX +	ES100 MAX	ES100 MAX +	ES100N MAX*					
Return air to evaporator	°C	-20	)°C	-20°C						
Capacity on engine power	W	17	50	17	50					
Capacity on electrical stand	W	11	70	11	70					
REFRIGERATION CAPACITY: INDIV	/IDUAL	COOLING CAPACITY								
		ES100	) MAX	ES100N	I MAX*					
Return air to evaporator		0°C	-20°C	0°C	-20°C					
Capacity on engine power	W	2670	1450	2260	1345					
Capacity on electrical stand	W	2195	1125	2015	1015					
HEATING CAPACITY										
On the road	W		2800							
Electric standby operation	W		20	)50						
AIRFLOW										
		ES100 MAX +	+ ES100 MAX	ES100 MAX +	ES100N MAX*					
On high speed engine operation	m³/h	69	95	695						
WEIGHT	_									
Condenser w/o electric standby	kg	25								
Condenser with electric standby	kg		7	75						
Evaporator ES100 MAX	kg		!	9						
Swash plate compressor	kg		6	.9						
COMPRESSOR										
Model			QP	213						
Displacement	сс		1:	31						
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										
Charge	kg		1.	35						
GENERIC										
Refrigerant		R-404A/R-452A								
Controller			DS	R III						
DEFROST	FROST									
Defrost			Automatic ho	ot gas defrost						

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

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

REFRIGERATION CAPACITY: AT	30°C AMF	SIENT									
NEINIOENAHON CALACITI. AI		ES150 +	+ ES150	ES150 -	+ ES100	ES200 + ES100					
Detum einte summerten	°C	20	200	20	200	20	200				
Return air to evaporator	°C W	-20	50		0°C 50		)°C 70				
Capacity on engine power Capacity on electrical stand	W		80		15		15				
REFRIGERATION CAPACITY: INE		-		14	CI.	010	12				
			) MAX	FS100	) MAX	ES200	) ΜΑΧ				
Return air to evaporator		0°C	-20°C	0°C	-20°C	0°C	-20°C				
Capacity on engine power	w	2895	1625	2685	1540	2940	1585				
Capacity on electrical stand	W	2340	1240	2005	1145	2340	1180				
HEATING CAPACITY											
On the road	W	3100									
Electric standby operation	w	2250									
AIRFLOW											
		ES150 MAX ES100 MAX ES200 MAX									
On high speed engine operation	m³/h	89	12	1210							
WEIGHT											
Condenser w/o electric standby	kg	25									
Condenser with electric standby	kg			7	5						
Evaporator ES150 MAX	kg			12	2.5						
Evaporator ES100 MAX	kg			(	Э						
Evaporator ES200 MAX	kg			1	5						
Swash plate compressor	kg			6	.8						
COMPRESSOR											
Model				QP	15						
Displacement	сс			14	6.7						
Number of cylinders				(	5						
ELECTRIC STANDBY MOTOR											
Voltage/phase/frequency			230/1/50 - 2	30/1/60 - 400/	3/50 - 230/3/5	50 - 330/3/60					
Rating	kW			3	.8						
REFRIGERANT CHARGE											
Charge	kg			30: 1.55	- 50: 1.6						
GENERIC											
Refrigerant		R-404A/R-452A									
Controller				DSI	R III						
DEFROST											
Defrost				Automatic ho	ot gas defrost						

### V-300 MAX SPECTRUM

# Multi-temperature models specifications

### V-500 MAX SPECTRUM

REFRIGERATION CAPACITY: AT 30	°C AM	BIENT										
			) MAX+ 0 MAX	ES300 MAX+ 2xES150 MAX		ES300 MAX+ ES150 MAX			ES500+ ES100n			
Return air to evaporator	°C	-20	D°C	-20	)°C	-20°C			-20°C			
Capacity on engine power	W	22	90	22	90	22	90		22	10		
Capacity on electrical stand	W	19	20	19	20	19	20		17	05		
REFRIGERATION CAPACITY: INDIV	/IDUAL	COOLING	G CAPACI	ΓY								
		ES30	D MAX	2XES15	50 MAX	ES150	) MAX	ES	500	ES1	00n	
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	3585	1850	3974	1970	2925	1410	4630	2380	2300	1290	
Capacity on electrical stand	W	3385	1670	3596	1700	2579	1320	4085	2020	2410	1075	
HEATING CAPACITY												
On the road	W					3600						
Electric standby operation	W					3120						
AIRFLOW												
			ES300 MAX + ES300 MAX + ES300 MAX + ES300 MAX + ES150 MAX						ES500+ ES100n			
On high speed engine operation	m³/h	2x1	185	1185+(	(2x700)	1185	+700	2700+790				
WEIGHT												
Condenser w/o electric standby	kg	53										
Condenser with electric standby	kg					125						
Evaporator ES300 MAX	kg					18						
Evaporator ES150 MAX	kg					12.5						
Evaporator ES100N	kg					8.5						
Evaporator ES500	kg					25.5						
Swash plate compressor	kg					7.1						
COMPRESSOR												
Model						QP 16						
Displacement	сс					163						
Number of cylinders						6						
ELECTRIC STANDBY MOTOR												
Voltage/phase/frequency			400/3/50	) - 230/3/	50 - 230/	3/60 - 230	0/1/50 - 2	230/1/6	0 - 380/	′3/60		
Rating	kW				6.	4 (400/3/	50)					
REFRIGERANT CHARGE												
Charge	kg	Model 30 = 2.4 kg and model 50 = 2.5 kg										
GENERIC												
Refrigerant		R-404A/R-452A										
Controller		DSR III										
DEFROST												
Defrost					Autom	atic hot ga	s defrost					

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

							Lernow				
REFRIGERATION CAPACITY: AT :	30°C AMI	RIENT									
		ES4	ES400 MAX+ ES400 MAX			ES600M/ ES150 M		ES600 MAX+ 2x ES150 MAX			
Return air to evaporator	°C		-20°C			-20°C			-20°C		
Capacity on engine power	W		4395			3850			4300		
Capacity on electrical stand	W		3595			3385			3595		
REFRIGERATION CAPACITY: IND	VIDUAL	COOLING (	CAPACITY		1						
		ES400	) MAX		ES600	) MAX	ES150	MAX	2 X ES1	50 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	5740	3300	67	65	3460	3975	2270	5640	2995	
Capacity on electrical stand	W	5300	3010	63	05	3110	3850	2165	5045	2705	
HEATING CAPACITY											
On the road	W					4500					
Electric standby operation	W					4000					
AIRFLOW											
		ES400 M/	ES400 MAX + ES400 MAX ES600 MAX + ES150 MAX ES600 N						ES600 MAX + 2XES150 MAX		
On high speed engine operation	m³/h		1760x2			2260+8	90	2	260+(2x89	0)	
WEIGHT					1						
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	СС					215					
Number of cylinders						10					
ELECTRIC STANDBY MOTOR											
Voltage/phase/frequency			4(	00/3/	50 - 2	30/3/50 - 40	00/3/60 - 23	30/3/60			
Rating	kW					8.2 (400/3	/50)				
REFRIGERANT CHARGE											
Charge	kg		ES400+ES	5400:	5.2 - E	S600+ES150	: 5.0 - ES600	+2XES150:	5.15		
GENERIC											
Refrigerant		R-404A/R-452A									
Controller						DSR II					
DEFROST											
Defrost					Διι	tomatic hot g	as defrost				

Note: specifications are subject to change without notice.

### V-800 MAX SPECTRUM

## **Dimensions (mm)**

#### **CONDENSER UNITS**



V-200/V-300

1180 485 V-200/V-300



V-200/V-300 Spectrum

**EVAPORATORS** 



ES100 Ultra Slim



ES100N\* Ultra Slim



ES200

Ultra Slim

ES300/ ES300 MAX Ultra Slim







135 25

In-cab Direct Smart Reefer

24 kg

1336 596 ES500 Ultra Slim

226

1330.5 ES600 MAX

Weights (approximate)

### **Condensers:**

V-100/V-200/V-300	
without electric stand-by	25 kg
V-100/V-200s with electric stand-by	43 kg
V-200/V-300 single temp. with	
electric stand-by	70 kg
V-200/V-300 Spectrum with	
electric stand-by	72 kg
V-500/V-500 MAX/ V-600 MAX/	
V-500 MAX Spectrum	53 kg
V-800/V-800 MAX/	
V-800 MAX Spectrum	100 kg

Evaporators:	
ES100 (Ultra Slim)	9.5 kg
ES100N* MAX (Ultra Slim)	8.5 kg
ES150 MAX (Ultra Slim)	14 kg
ES200 (Ultra Slim)	15 kg
ES300/ES300 MAX (Ultra Slim)	18 kg
ES400 MAX	20 kg
ES500 (Ultra Slim)	25.5 kg
ES600 MAX	28 kg
ES800 (Ultra Slim)	35 kg
Others:	

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

Installation kit (incl. cpr.)





### 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.



As a Thermo King owner, you have invested in trusted and proven technology. So when maintaining your unit, it makes sense to choose original Thermo King replacement parts. It is reassuring to know that every part has been exhaustively tested to the same world-class standards as your Thermo King unit. Genuine parts last longer and perform dependably day after day, year after year.

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## 

Therm Assistance

ThermoAssistance is a multilingual telephone service putting you in contact with an authorised Thermo King Service Dealer whenever the need arises. It is available across Europe 24/7/365.

> TELEMATICS: INTELLIGENT SERVICES AND SMART DATA MANAGEMENT





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