

# C-SERIES

— reliable protection for fresh and frozen cargo —

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



# C-Series

EXTENDED PRODUCT RANGE  
FOR SMALL, MEDIUM AND LARGE VEHICLES

The C-Series is the ideal way to deliver temperature-sensitive cargo in small, medium, and large vehicles of up to 52 m<sup>3</sup>. With their superior flexibility, the units are perfectly suited to the rigorous demands of multi-drop distribution runs, even in extreme high and low ambient temperatures.

The faster temperature pull-down enables quicker recovery from door openings and better cargo protection. The user-friendly in-cab controller ensures effortless and error-free operation. C-Series models are ultra light and compact, making it possible to maximize your payload. With the introduction of new medium and large range models, there are seven road-only models available to match your exact needs.



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## DESIGNED FOR HIGHER PERFORMANCE

- Quicker temperature pull-down
- Higher airflow
- Larger condensing capacity
- Lightweight and compact design
- Reduced refrigerant charge
- Increased efficiency and sustainability
- Optimized heating performance
- Suitable for extreme ambient conditions
- 2-year warranty (unit and parts)

# C-Series — Multiple Choice

## C-SERIES FOR SMALL TO MEDIUM TRUCKS: HIGH PERFORMANCE, LOW TOTAL COST OF OWNERSHIP.

Looking for top temperature control and reliable, powerful performance, even in demanding, multi-drop urban environments? The highly versatile C-Series is **THE solution** you need when you want an efficient and compact refrigeration unit.

The C-Series stays chilled **even in extreme high and low ambient temperature situations**. In fact, because we know the ambient temperatures determines the unit you choose, Thermo King has created a series of **MAX 10 versions**. This includes a version for regions that don't require heating, and less costly versions with a simplified refrigeration circuit.

**You want highly energy efficient and ultralight equipment?**

**The C-Series range has the model to suit your needs:**

- No defrost models
- Heating and cooling models
- Cooling only models



C-150 TO C-350

**NEW**

## C-SERIES FOR MEDIUM TO LARGE TRUCKS: THE BEST JUST GOT BIGGER.

The C-Series range has been extended. It now includes optimal single-temperature control solutions **for large trucks, up to an impressive 52 m<sup>3</sup>**. Naturally, our C-450 and **new C-550, C-650 and C-750 models** have everything you'd expect from Thermo King's C-Series, except that they are bigger and more powerful.

Large condensing capacity? **Check.** Lightweight? **Check.** Compact design? **Check.**

**If you want a highly efficient and sustainable unit for both frozen and fresh applications, the new bigger and better C-Series range is the ideal solution for you.**



C-450 TO C-750

## PRODUCT FEATURES

### POWERFUL ROAD COMPRESSOR

- Widely available drive kits
- QP16/TM16 standard across the range
- Proven reliability and robustness
- Available in 2 A/Double A and Poly V8/PV8 belt configurations

### USER FRIENDLY CONTROLLER

- Intuitive design for easy use
- Microprocessor intelligence
- Display protected against moisture

### HIGH CAPACITY CONDENSER FOR LARGE TRUCKS

- Aluminium microchannel heat exchanger to reduce weight and refrigerant charge
- Two condensing fans to improve condensing capacity and design redundancy
- Robust control board



# Options

## STANDARD CONFIGURATION

### THERMOKARE

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

### NEW TOUCHLOG DATA CAPTURE

The user-friendly temperature recorders capture relevant data ensure the availability of delivery and journey reports. Approved to EN 12830, CE Mark, and IP-65 standards. Requires data logger.

## FACTORY SUPPLIED OPTIONS

### HOSE COVERS

Full protection of hoses and cables against climate extremes while on the road. Aesthetically designed and exceptionally durable. User friendly installation. (Only for chassis installations. Not suitable for vans.)

### SNOW COVERS

Designed to protect the unit under extreme weather conditions. The aerodynamically designed covers prevent the accumulation of ice and snow on the fans, which can adversely affect the functioning of the unit. Snow Cover not available for C-450, C-550, C-650 and C-750.

### LARGE HOSES KIT

The standard kit is equipped with 5 metres long hoses to connect road compressor and condensing section. This optional kit is suitable for larger hose routings (6 metres long). The C-550, C-650 and C-750 are provided with a 6m long hose kit as default.

### TRACKING

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

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

Access to TracKing data requires the installation of a telematics device.

### CSR DASHBOARD HMI HOLDER

Optional plastic support to locate in-cab CSR controller in an ideal location.

### BUMPER ROOF MOUNTING KIT

The standard kit is for nose-mount installation. This optional kit includes a number of silent blocks for roof-mount installations.

### SWIVEL MANIFOLD KIT

Standard manifold is straight (fixed position). This optional manifold (swivel) allows connections to compressor to be adjustable.

### KIT FITTING HOSES 90°

The C-Series units are shipped without any road compressor fittings as default. 90° road compressor fittings are optionally available from the factory.

# Control at your fingertips

From the operator's viewpoint, the interface with the refrigeration system must be both intuitive and informative. The easy-to-use C-Smart Reefer (CSR) in-cab controller optimizes unit performance and ensures total load protection by delivering information to the operator in an intuitive way. A dashboard holder for the in-cab CSR is available as an option enabling the operator to position the controller in multiple places.



## FEATURES

- Durable and reliable in extreme temperatures up to 75 °C
- User friendly and compact
- Flexible and modular
- Microprocessor intelligence
- Display protected against moisture
- Soft starting to reduce peak battery demands and increase compressor life
- "Limp home" function to allow operation without any display
- Discrete design to complement vehicle dashboard

## FUNCTIONS

- Heat, cool and defrost symbols
- Easily understandable symbols and alarm codes
- Manual and automatic defrost
- Hour metres to record operation times
- Battery voltage check
- Optional dashboard mount kit for CSR

### FULLY ADJUSTABLE SET POINT RANGE

REFRIGERANT	R-404a / R-452a	R-134a + Defrost	R-134a
SET POINT RANGE	22 °C to -32 °C	22 °C to -10 °C	22 °C to 0 °C



	0 VERSION (NO DEFROST)	10 VERSION	MAX 10 VERSION	MAX 30 VERSION
	C-150 TO C-650	C-150 10 TO C-650 10	C-150 MAX 10 TO C-750 MAX 10	C-150 MAX 30 TO C-750 MAX 30
<b>UNIT CONFIGURATION</b>				
REFRIGERANT	R-134A	R-134A	R-404A / R-452A	R-404A / R-452A
VOLTAGE	12 V / 24 V	12 V / 24 V	12 V / 24 V	12 V / 24 V
DEFROST	NO	YES	YES	YES
HEATING	NO	NO	NO	YES
STANDBY	NO	NO	NO	NO

# Specifications

SPECIFICATIONS		C-150		C-250		C-350	
<b>REFRIGERATION CAPACITY: AT 30 °C AMBIENT/2400 RPM</b>							
<b>RETURN AIR TO EVAPORATOR</b>		0 °C/30 °C	-20 °C/30 °C	0 °C/30 °C	-20 °C/30 °C	0 °C/30 °C	-20 °C/30 °C
CAPACITY ON ENGINE POWER	R-134a (W)	1665	N/A	2255	N/A	2965	N/A
CAPACITY ON ENGINE POWER	R-452a (W)	2080	1090	2770	1460	3330	1840
<b>HEATING CAPACITY: AT -18 °C AMBIENT/2400 RPM (MAX 30 UNITS ONLY)</b>							
<b>RETURN AIR TO EVAPORATOR</b>		+18 °C/-18 °C		+18 °C/-18 °C		+18 °C/-18 °C	
CAPACITY ON ENGINE POWER	R-452a (W)	1900		2800		3100	
<b>EVAPORATOR FAN PERFORMANCE</b>		<b>ES100</b>		<b>ES200</b>		<b>ES300</b>	
AIRFLOW VOLUME	m <sup>3</sup> /h	866		1241		1379	
<b>WEIGHT</b>							
CONDENSER	kg	23		23		23	
EVAPORATOR	kg	8.5		13		18	
TOTAL WEIGHT	kg	32		37		42	
<b>DIMENSIONS</b>							
CONDENSER (W x D x H)	mm			789 x 500 x 227			
EVAPORATOR (W x D x H)	mm	608 x 490 x 187		985 x 525 x 133		985 x 550 x 178	
<b>COMPRESSOR: MAX RECOMMENDED SPEED 3000 RPM</b>							
MODEL		QP08		QP13		QP15	
DISPLACEMENT	cc	82		131		147	
NUMBER OF CYLINDERS		6		6		6	
<b>DC VOLTAGE CURRENT DRAW</b>							
TOTAL CURRENT CONSUMPTION ON THE ROAD	12 V DC (A)	16,0		21,0		21,0	
	24 V DC (A)	8,0		10,5		10,5	
<b>REFRIGERANT CHARGE</b>							
R-134a	kg	0.6		1.0		1.2	
R-404a / R-452a	kg	0.6		1.0		1.2	
<b>DEFROST</b>							
R134a / R-452a	kg	AUTOMATIC HOT GAS DEFROST					



		C-450		C-550		C-650		C-750	
<b>REFRIGERATION CAPACITY: AT 30 °C AMBIENT/2400 RPM</b>									
<b>RETURN AIR TO EVAPORATOR</b>		0 °C/30 °C	-20 °C/30 °C	0 °C/30 °C	-20 °C/30 °C	0 °C/30 °C	-20 °C/30 °C	0 °C/30 °C	-20 °C/30 °C
CAPACITY ON ENGINE POWER		3315	N/A	3790	N/A	4200	N/A	N/A	N/A
CAPACITY ON ENGINE POWER		4430	2335	5180	2525	6030	3000	6820	3735
<b>HEATING CAPACITY: AT -18 °C AMBIENT/2400 RPM (MAX 30 UNITS ONLY)</b>									
<b>RETURN AIR TO EVAPORATOR</b>		+18 °C/-18 °C		+18 °C/-18 °C		+18 °C/-18 °C		+18 °C/-18 °C	
CAPACITY ON ENGINE POWER		3800		4000		4180		4350	
<b>EVAPORATOR FAN PERFORMANCE</b>		<b>ES450</b>		<b>ES550</b>		<b>ES650</b>		<b>ES750</b>	
AIRFLOW VOLUME		1721		2040		2682		2956	
<b>WEIGHT</b>									
CONDENSER		31		31		31		31	
EVAPORATOR		18		20		29		31	
TOTAL WEIGHT		50		59		69		71	
<b>DIMENSIONS</b>									
CONDENSER (W x D x H)		1180 x 485 x 213		1180 x 485 x 213		1180 x 485 x 213		1180 x 485 x 213	
EVAPORATOR (W x D x H)		985 x 550 x 178		1080 x 592 x 336		1336 x 733 x 226		1330 x 592 x 240	
<b>COMPRESSOR: MAX RECOMMENDED SPEED 3000 RPM</b>									
MODEL				QP16					
DISPLACEMENT				163					
NUMBER OF CYLINDERS				6					
<b>DC VOLTAGE CURRENT DRAW</b>									
TOTAL CURRENT CONSUMPTION ON THE ROAD		35,0		45,0		53,0		53,0	
		19,0		22,5		26,5		26,5	
<b>REFRIGERANT CHARGE</b>									
R-134a		1.2		1.3		1.6		N/A	
R-404a / R-452a		1.2		1.6		1.7		1.9	
<b>DEFROST</b>									
AUTOMATIC HOT GAS DEFROST									



# Unit selection guide

MODEL	AMBIENT TEMPERATURE			
	30 °C		40 °C	
	+0/2°C	-20°C	+0/2°C	-20°C
<b>R-134a</b>				
C-150	12 m <sup>3</sup>	N/A	8 m <sup>3</sup>	N/A
C-250	18 m <sup>3</sup>	N/A	13 m <sup>3</sup>	N/A
C-350	25 m <sup>3</sup>	N/A	18 m <sup>3</sup>	N/A
C-450	31 m <sup>3</sup>	N/A	22 m <sup>3</sup>	N/A
C-550	32 m <sup>3</sup>	N/A	21 m <sup>3</sup>	N/A
C-650	35 m <sup>3</sup>	N/A	23 m <sup>3</sup>	N/A
<b>R-404a / R-452a</b>				
C-150 MAX	16 m <sup>3</sup>	8 m <sup>3</sup>	11 m <sup>3</sup>	6 m <sup>3</sup>
C-250 MAX	22 m <sup>3</sup>	13 m <sup>3</sup>	15 m <sup>3</sup>	10 m <sup>3</sup>
C-350 MAX	28 m <sup>3</sup>	17 m <sup>3</sup>	20 m <sup>3</sup>	13 m <sup>3</sup>
C-450 MAX	34 m <sup>3</sup>	21 m <sup>3</sup>	24 m <sup>3</sup>	16 m <sup>3</sup>
C-550 MAX	40 m <sup>3</sup>	24 m <sup>3</sup>	32 m <sup>3</sup>	18 m <sup>3</sup>
C-650 MAX	47 m <sup>3</sup>	30 m <sup>3</sup>	38 m <sup>3</sup>	22 m <sup>3</sup>
C-750 MAX	52 m <sup>3</sup>	39 m <sup>3</sup>	40 m <sup>3</sup>	28 m <sup>3</sup>

The table above is a guide to select the right unit in the new C-Series to match your application. These figures are maximum vehicle volumes, calculated on road operation, at 2400 rpm compressor speed and 30 °C/40 °C ambient temperature. Recommendations are based on precooled loads and a 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 °C and +6 °C) for a distribution cycle of 8 hours.

**Recommendations are not a guarantee of performance as there are many variables to be considered. See your Thermo King dealer for complete information.**



# Dimensions

### CONDENSER UNITS

C-150/C-250/C-350 CONDENSER

C-450/C-550/C-650/C-750 CONDENSER

### EVAPORATORS

ES100 ULTRA SLIM EVAPORATOR

ES200 ULTRA SLIM EVAPORATOR

ES300/ES450 ULTRA SLIM EVAPORATOR

ES550 EVAPORATOR

ES650 ULTRA SLIM EVAPORATOR

ES750 EVAPORATOR

### CONTROLLER

CSR IN-CAB CONTROLLER

### 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.**





## **THERMO KING**

Thermo King – by Trane Technologies (NYSE: TT), a global climate innovator – is a worldwide leader in sustainable transport temperature control solutions. Thermo King has been providing transport temperature control solutions for a variety of applications, including trailers, truck bodies, buses, air, shipboard containers and railway cars since 1938.

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