

# Magnum Plus<sup>®</sup>

Fresh or frozen. Faster is better.

CONTAINER REFRIGERATION SOLUTIONS



MAGNUM PLUS®

# Premium performance. No compromise.

Thermo King is committed to engineering innovative products and technologies to provide ever-increasing levels of efficiency and performance to customers around the world.

The MAGNUM PLUS® is the result of years of consolidated field experience acquired with its predecessors.

**With better temperature control than ever and a raft of optional functionality, there's no better reefer on land or sea.**

## LOWEST TEMPERATURE

The MAGNUM PLUS® is the only unit on the market capable of reaching and maintaining -40°C box temperature in +50°C ambient environment, thereby preserving product quality and further increasing usable box life.

## FAST PULL-DOWN

Thanks to its superior cooling capacity, the MAGNUM PLUS® can increase storage life by reaching the set-point faster and more accurately

## PRECISE TEMPERATURE CONTROL

The unique MAGNUM PLUS® advanced temperature management control systems deliver extremely tight temperature control up to +/- 0.25°C.I.

## LOW ENERGY CONSUMPTION

Less energy is required with MAGNUM PLUS® with its MP5000 controller, allowing significant cost savings and setting a new standard in efficiency.

## PROVEN TECHNOLOGY & SIMPLE DESIGN

With over 100,000 units in service, millions of trips around the world and years of experience, the MAGNUM PLUS® platform has proven itself time and again in rugged circumstances as being extremely reliable.

MAGNUM PLUS® stands out with its streamlined design (low number of subcomponents and fixation points) and characteristic V-shape frame.

## GLOBAL SERVICE

Thermo King's service network provides support you can count on, 24/7, around the globe, with dedicated service engineers and a high number of dealers.

Service means not only maintenance and repair but performance-enhancing retrofit adaptations to increase the performance of your existing fleet.

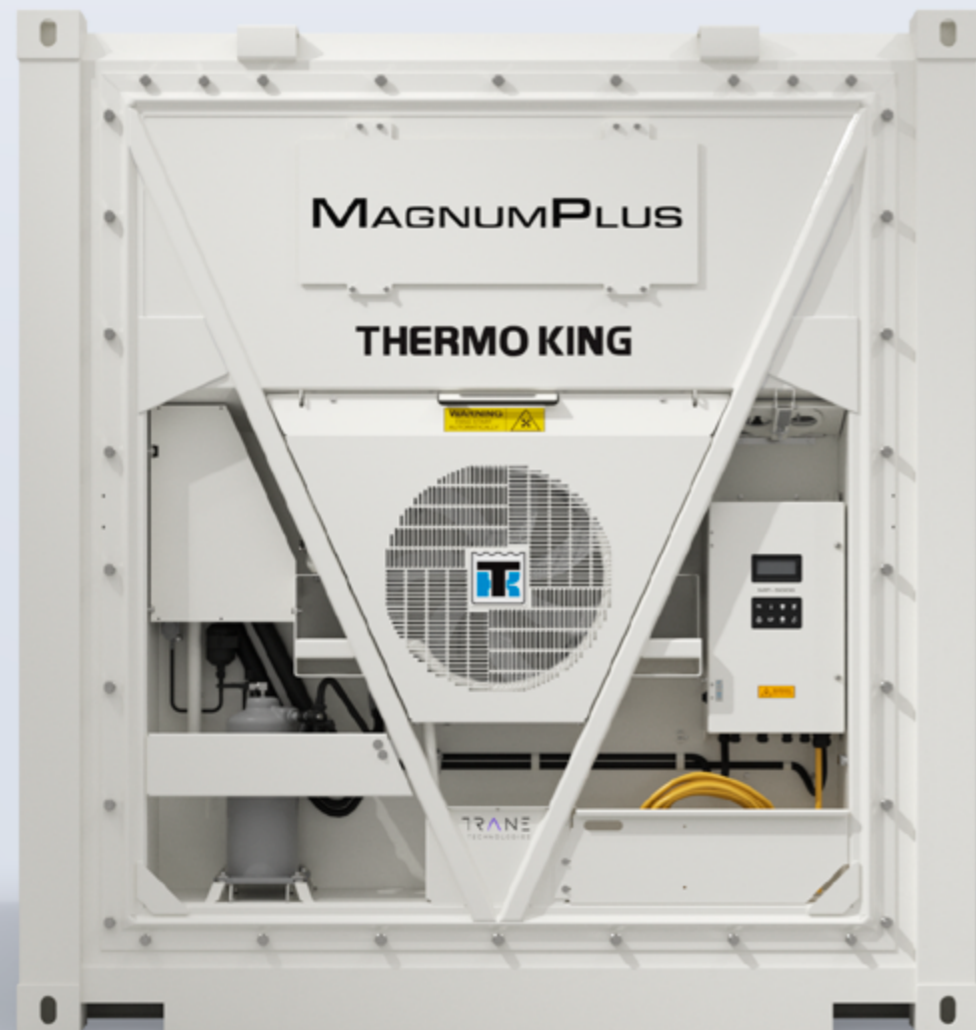


MAGNUM PLUS®

# 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.

When it comes to fresh or frozen cargo, you need a reliable reefer that adapts to the specific requirements of each load. Thermo King's MAGNUM PLUS® provides the best cold chain capability on the market, **easily adaptable for different options and customizable to recognize your brand at first sight.**



## R-452A REFRIGERANT

Thermo King was determined to see a new, environmentally sensible and future-compliant refrigerant for transportation applications.

**The result? Reliable, compliant cold chain solution.**



## 2-WAY CONNECTIVITY

Thanks to its remote monitoring module and Bluetooth connectivity, **the MP-5000 controller enables 2-way communication via the TK Tek-Marine**, so user can execute commands like PTI, defrost, change of set-points or retrieve a log-file.

A telematics device, like RMM-W, and a ISO10368 Power Line Modem can be installed into the MP-5000 control box.

The event and temperature logs, allow as well for every trip to obtain data points – temperatures, humidity, air-exchange, CO<sub>2</sub> & O<sub>2</sub>, pressure, events, PTI results, power consumption, and more.



## FRESH AIR MANAGEMENT: TK FRESH+

TK FRESH+, Advanced Fresh Air Management, protects fresh produce from detrimental atmosphere conditions. TK FRESH+ precise fresh air settings take the guesswork out of fresh air exchange. AVL (air vent logging) tracks the opening of the air vent during shipment.



## VALVES, CABLES AND PLUGS

Every component, no matter its size, is important to the overall quality and performance of your unit. Genuine Thermo King valves, cables and plugs are constructed of high quality materials, designed for perfect fit and alignment, and are rigorously pre-tested to insure efficient operation in every Thermo King unit. We offer a wide range of customizations to comply with specific customer demands



## SMART PTI

Smart Pre-Trip Inspections (PTI) save time, money, with the capability to perform full inspections during normal reefer operation, anytime or anywhere the unit is operating - empty or loaded. Smart PTI is a patented solution by Thermo King.

**The result? The Smart choice, reliable and cost effective health monitoring.**



## ENERGY LOGGING

Make intelligent decisions based on real data with MAGNUM PLUS® equipped with MP5000 controller. By logging the power consumption of each trip, MAGNUM PLUS® enables you to monitor your kWh and CO<sub>2</sub> footprint.

**The result? Sustainability, and energy tracking on and off vessel at every voyage.**



## LOGOS, DECALS AND COLOR

Proudly display your brand by fully customizing the visual aspects of your Magnum Plus fleet with your own logo, decals, and color.



## WATER-COOLED CONDENSERS

In demanding applications where air cooling capacity is insufficient (below-deck cargo transportation), water cooled condensers offer a reliable alternative to ensure smooth operations.



## SYNCHRONIZED DEFROST

Synchronizing simultaneous defrost cycles for adjoining reefers is critical for optimum cooling performance.

MAGNUM PLUS®

# MP-5000 controller: helping you run a tighter ship.

Advanced control algorithms, faster processors, and ultraprecise PT1000 control sensors deliver the best-in-class temperature control that is essential when transporting chilled, fresh, and frozen cargos by sea. With the uniquely intelligent and ultra-reliable MP-5000 controller, every MAGNUM PLUS® unit boasts temperature accuracy of up to +/-0.25°C.

## ECO-MODE EFFICIENCY

MP-5000 offers an **Optimized Mode** that reduce power consumption, without compromising temperature management. With the MP-5000, the MAGNUM PLUS® sets new standards in operating efficiency for **significant cost and energy savings and a lower total cost of ownership**

## LOWER TOTAL COST OF OWNERSHIP

By locating the MP-5000 **inside the control box**, decoupling display and keyboard, and using standard contactors, the controller offers **easier maintenance, and improved durability and reliability, for a lower total cost of ownership.**

## ENERGY LOGGING

Make intelligent decisions based on real data with MAGNUM PLUS® equipped with MP-5000 controller. By logging the power consumption of each trip, MAGNUM PLUS® enables you to monitor your kWh and CO<sub>2</sub> footprint. The result? Sustainability, and energy tracking on and off vessel at every voyage.

## 2-WAY CONNECTIVITY

Thanks to its remote monitoring module and Bluetooth connectivity, the MP-5000 controller enables 2-way communication via the TK Reefer App for Android and IOS, so user can execute commands like PTI, defrost, change of set-points or retrieve a log-file. A telematics device, like RMM-W, and a ISO10368 Power Line Modem can be installed into the MP-5000 control box.

The event and temperature logs, allow as well for every trip to obtain data points – temperatures, humidity, air-exchange, CO<sub>2</sub>/O<sub>2</sub>, pressure, events, PTI results, power consumption, and more.



## RENOWNED USABILITY

Building on the proven capabilities of the user-friendly MP-4000 controller, the MP-5000 controller features:

- Alarm and warning codes
- Pre-trip inspections
- Text rich definitions
- LED status lamps
- Advanced screen flow
- Software customization capability
- Bluetooth connectivity

# Technical Specifications

MODEL

MAGNUM PLUS®

## PERFORMANCE

Net cooling capacity at 37.8°C (100°F) ambient temperature at 60 Hz power

Setpoint	460V, 3 Phase, 60 Hz Power		
	Net Cooling Capacity		Power Consumption
	Capacity BTU/hr	Capacity kW	Power kW
21.1°C (70°F)	56 700	16 500	11 500
1.7°C (35°F)	40 945	11 900	11 000
-17.8°C (0°F)	24 785	7 200	7 500
-28.9°C (-20°F)	17 251	5 000	6 600
-35°C (-31°F)	14 000	4 100	6 000
-40C (-40F)	12 636	3 700	3 650

Test method according to AHRI standard no. 1110-69 approval. Unit mounted in test room.

MODEL

MAGNUM PLUS®

## PERFORMANCE

Evaporator Airflow Specifications System Net Heating Capacity

MAGNUM PLUS®	460V, 3 Phase, 60 Hz Power		380V, 3 Phase, 50 Hz Power	
	Heating Capacity			
	Watts	BTU/hr	Watts	BTU/hr
	5 250	17 914	3 900	13 300

System net heating capacity includes fan heat.

## STAY SUPPORTED BY YOUR THERMO KING DEALER

The Thermo King dealer network boasts over 460 authorized service points throughout the world – all are open and available 24/7.

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## LOW TEMPERATURE

The MAGNUM PLUS® is capable of reaching and maintaining -40°C box temperature in a +50°C ambient environment, thereby preserving product quality and further increasing usable box life.

## FAST PULL-DOWN

Thanks to its superior cooling capacity, the MAGNUM PLUS® can increase storage life by reaching the setpoint faster and more accurately.

## HIGHEST COOLING CAPACITY

Thanks to its homogenous floor spread and high performance the MAGNUM PLUS® gives you the highest cooling capacity available on the market.

