



TriPac™

Hybrid Auxiliary Idle Reduction and Temperature Management System





The TriPac™ System: *Nothing Compares*

Since its introduction, the TriPac Hybrid Idle Reduction and Temperature Management System has become the number one Auxiliary Power Unit (APU) system in the industry for one major reason: it outperforms the competition.



Unmatched Service & Support. The TriPac system is backed by the Thermo King dealer network, which provides expert installation, factory-certified technicians and genuine OEM parts at over 200 locations across North America.

Fuel Savings. With over 60,000 units in service, the fuel-saving advantages of the TriPac design vs. generator-based designs has become even more apparent. The TriPac system runs only when you need it, saving you significantly more money on fuel than generator solutions.

Emissions Regulations/CARB compliance. As the expert in idle compliance, Thermo King designed the TriPac system to provide you with a solution for nationwide operation. The optional Diesel Particulate Filter (DPF) allows you to operate coast-to-coast and border-to-border while helping you stay compliant with the confusing variety of regulations regarding engine idling.

Preferred by Drivers. Drivers look for and stay with the TriPac system for what it provides (comfort, reliability, seamless operation, realized fuel savings) and what it does not (noise, uncertainty, limited service options).

With these New Features, the TriPac System does even more for you!



Greater Fuel Savings. Programmable settings within the controller means the TriPac system doesn't heat or cool the cab during out-of-service days; it simply monitors and maintains battery voltage and engine coolant temperatures so that the tractor starts dependably.



Stainless Steel Skins. Dress up your rig with our optional stainless covers. Polished to a high gloss, they look good for the long haul and can keep up with even the showiest of rigs



Closed Loop Cooling (CLC). If you frequently operate in warm climates or simply prefer that the TriPac system not tie into the tractor engine coolant, choose the CLC option. The TriPac will run independently of the tractor engine coolant and still provide the battery charging and cab comfort options you demand.



Improved Performance. Our engineers are constantly working to improve the TriPac system, making the best even better.

Custom-Configure Your TriPac System with a Wide Array of Options



Base TriPac System (900217)

Provides sleeper and cab cooling/heating, battery charging with automatic voltage sensing and has auto start/stop for maximum fuel efficiency.

- 2-cylinder, Tier IV-compliant diesel engine
- 13,000 BTU air conditioning system including compressor, evaporator, controller (system charged with R-134a at Thermo King dealership during installation)
- 7,500 BTU fuel-fired heater
- Single HVAC controller
- 65-amp alternator
- Thermo King DPF-compatible

Option Ordering Guide

- 120 amp Alternator (005033)**

Provides quicker battery charging under heavy accessory loads. Ideal for supersized sleepers and drivers with heavy appliance usage during rest periods.
- Stand-By Truck Integration (005013)**

Provides seamless activation of the TriPac control system based on tractor engine off/on indication.
- Stand-By Truck Integration with Dash-Mounted Selector Switch (005014)**

Provides the driver the ability to place the TriPac in a non-start mode (used during tractor fueling, service situations or when exiting the tractor) from the driver's seat.
- Remote Hour Meter (005029)**

Provides separate fuel-fired heater and TriPac engine time tracking for accurate and effective preventive maintenance. Allows technician to access and record hours of operation without entering tractor cab.
- Inverter (005016)**

1,800 watt modified sine wave inverter with a 3,600 watt surge rating. Includes two GFI receptacles. Typically mounts under bunk.
- Closed Loop Cooling (005831)**

Lets TriPac run independently of tractor coolant and allows "limp home" capability in case of tractor alternator failure.
- High Output Heater (005018)**

With 13,600 BTUs of fuel-fired output, this heater will keep you warm on the coldest of nights. With only slightly higher fuel consumption than the standard heater, this option is popular with drivers operating in the northern United States and in Canada.
- High Altitude Compensation Kit (005548)**

Advanced electronics and a barometric sensor allow the fuel-fired heater to adjust fuel flow to changing altitudes. Recommended for drivers taking rest periods at or above 4000'. Adjustments are automatic and continue to take place to an altitude of approximately 10,000'.
- Diesel Particulate Filter (DPF) Options**

Certified CARB-compliant for operation in the state of California.

 - (Standard Mount 005024)**

Mounts to rear of base TriPac system in place of muffler
 - (Remote Mount)**

See dealer for ordering information
- Arctic Package (005015)**

Monitors tractor engine coolant temperature and automatically starts the TriPac to heat the shared engine coolant. Reduces cold weather starting issues for the tractor even after extended periods of no operation in cold temperatures
- Extreme Arctic Package (005036) (requires 005015)**

With the addition of a 800 watt coolant heater and a 300 watt oil heater powered by the TriPac, this package gets your tractor started in the coldest of environments with minimal wear and tear. 120 amp alternator included.
- Stainless Steel Skins (005031)**

The polished stainless steel skins dress up any rig, moving or standing still.
- Brushed Stainless Steel Condenser Cover (005011)**

Adds additional corrosion protection as well as that finishing touch.
- Flush Mount Kits (See dealer for ordering information)**

Special mounting kit which keeps the top of the unit flush with the top of the tractor frame rail.



User-Friendly In-Cab Controller

delivers precise temperature management

HMI controller is installed in the cab.



Main Power Key

Turns TriPac APU system on and off.

Fuel Saver Technology

TriPac utilizes Thermo King's Cycle Sentry technology to maximize fuel economy by starting and stopping the system based on customer requirements. This reduces overall engine run time and lowers fuel consumption.

Mode Key

Ability to select operating modes of air conditioning, heating or fan only.

Fan Speed Key

Allows selection of fan speed.

Up and Down Keys

Used to raise and lower temperature setpoint.

Display

Provides temperature setpoint, hourmeter reading and alarm codes.

System Fault Indicator

Red indicator illuminates when an alarm condition occurs and an alarm code is displayed.

APU System Key

Enables the APU to run to provide sleeper compartment air conditioning, air circulation, truck battery voltage sensing and engine coolant temperature sensing. Note that the APU does not have to be On to operate the TriPac sleeper compartment heater.

Expert Service and Support are as close as this sign.

Choose TriPac and enjoy the support of the Thermo King Dealer Network.

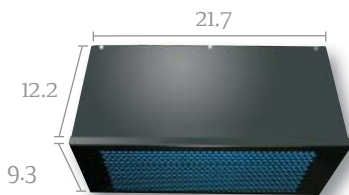
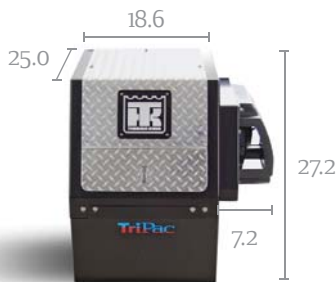


Over 200 factory-authorized service centers nationwide!



Specifications

Dimensions (inches)



Description

The TriPac System provides truck engine preheating, battery charging, truck cab sleeper compartment climate control and electric power.

Engine

Tier IV-compliant Thermo King 2-cylinder diesel

Evaporator Airflow

250 ft³/min

Alternator

65 amp
120 amp (optional)

Refrigerant

HFC R-134a

Compressor

Thermo King TM-15
Air Conditioning Compressor

Air Conditioning Capacity*

BTU/hr	Watts
13,000	3,810

Controls

The TriPac HMI (Human Machine Interface) Controller is installed in the truck cab and can be customized to meet customer's specific needs.

Heating Capacity

BTU/hr	Watts
7,500	2,200
13,600	3,986 (optional)

System Weight (approx.)

APU Unit:	430 lbs	(195 kg)
HVAC System:	70 lbs	(32 kg)

Worldwide Service Organization

Thermo King backs its equipment and customers with a highly-trained, worldwide service organization. This assures you the support of factory authorized service facilities and a stock of factory parts as well as factory trained mechanics.

Warranty Summary

Terms of the Thermo King Limited Express Warranty are available upon request.

Extended Warranty

Several Extended Warranty options are available for your TriPac system. Choose a flexible program and select the warranty period, deductible and hours of operation that best meet your needs. Ask your local Thermo King dealer about nationwide coverage plans.

***ARI STD 310/380** - Standard for Packaged Terminal Air-Conditioners and Heat Pumps for the rating conditions of 80F Box, 50% humidity, and 95°F ambient.

Payback Calculator

Consult the TriPac ROI Calculator at www.thermoking.com to determine your potential savings with TriPac!



Contact Your Local Thermo King Dealer:

Save Money Every Mile with the TriPac System

Your Idling Hours Annually	\$2.50 a Gallon			\$3.00 a Gallon			\$3.50 a Gallon		
	Tractor Idling	TriPac	Savings Per Mile w/TriPac	Tractor Idling	TriPac	Savings Per Mile w/TriPac	Tractor Idling	TriPac	Savings Per Mile w/TriPac
3,000	7.5 ¢	1.1 ¢	6.4 ¢	9 ¢	1.3 ¢	7.7 ¢	10.5¢	1.5 ¢	8.9 ¢
2,500	6.3	.9	5.4	7.5	1.1	6.4	8.7	1.2	7.4
2,000	5	.7	4.3	6	.9	5.1	7	1	5.9
1,500	3.8	.5	3.2	4.5	.6	3.9	5.2	.7	4.4
1,000	2.5	.4	2.1	3	.4	2.6	3.5	.5	2.9
500	1.3	.2	1.1	1.5	.2	1.3	1.7	.2	1.4

EXAMPLE: If you idle 2500 hours per year with a fuel price of \$3.00 per gallon, you can save up to 6.4 cents per mile based on fuel costs alone with TriPac!

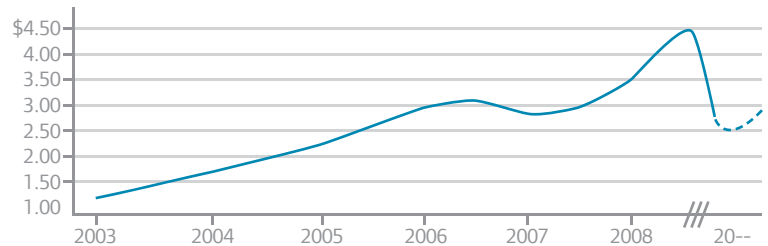
Tractor Idling Assumptions
 Annual Miles100,000
 Idling Fuel Cost.....1.0 gph

TriPac Assumptions
 % per year gph
 % per year gph
Cooling..... 60% 0.2* **Heating**40%0.06*
 Find your cost per mile savings with TriPac (based on fuel consumption only) Does not include fuel savings from start/stop off time *Fuel consumption will vary based on ambient temperature and tractor cab insulation characteristics

Stress Less over Fluctuating Fuel Costs

Fuel represents a significant portion of your operational costs, and the frequent fluctuations in price can be worrisome and costly. The fact is, fuel prices have risen significantly over the last decade. Investing in the TriPac system today means less stress next time fuel prices spike. Waiting until fuel costs reach a specific point to get your TriPac means waiting to take advantage of the savings and not being ready for the inevitable future fuel cost increases.

U.S. Diesel Pump Prices




1000-Hour Maintenance Interval

TriPac was designed with (and has led the industry to) a 1000-hour maintenance interval, allowing maintenance to be performed at the same time as maintenance on the tractor, saving time and eliminating additional downtime for APU maintenance. Actual maintenance intervals on the TriPac are even further extended when the auto start/stop function is taken into account. This feature turns the TriPac on only when needed, saving fuel and reducing the number of hours the unit runs compared to the competition.

Thermo King is the Green Leader

Thermo King offers industry-leading products and solutions that enable businesses around the world to reduce energy consumption and costs and decrease harmful environmental emissions.

The  symbol indicates a feature that delivers a significant environmental advantage or benefit.



Providing equipment and services to manage controlled-temperature environments for food and other temperature-sensitive products, our Climate Control Technologies sector encompasses both transport and stationary refrigeration solutions. Our product brands include Thermo King®, a world leader in transport temperature control systems, and Hussmann®, a manufacturer of refrigeration and food merchandising equipment.

www.thermoking.com www.hussmann.com www.ingersollrand.com



TriPac[®] Evolution

The industry-leading APU that delivers lower operating costs and superior driver comfort.





TriPac[®]



Built on the industry-leading TriPac auxiliary power unit (APU) and supported by the Thermo King dealer network, the TriPac Evolution raises the bar even higher with unrivaled performance, low operating costs, easy operation and true peace of mind.

The TriPac Evolution was not only designed to meet Tier IV EPA final regulation requirements; it was designed to respond to and anticipate evolving customer needs by leveraging new patented technologies that drive unit efficiency and user productivity. Its performance is uncompromised. The operational savings are real.



EVOLUTION

MAXIMUM DRIVER COMFORT

Drivers spend long days away from home on the road, and a comfortable sleeper is important for well-rested and safe drivers. The TriPac Evolution brings the comforts of home to wherever home is for the night: virtually unlimited cooling and heating and the power to run the appliances and devices drivers require.

For fleets, attracting and retaining the best drivers is a challenge, and offering TriPac Evolution APUs can be a key recruitment and retention tool. There's a reason why drivers ask for TriPac Evolution by name!

SERIOUS FUEL SAVINGS

No matter the current price, fuel costs represent a significant portion of your operating expenses. Adding the TriPac Evolution will significantly reduce your fuel consumption - by up to 2,500 gallons per year.* The TriPac Evolution: cash flow positive from the beginning!

REDUCED TRACTOR IDLING

Idling the tractor engine to provide cab power causes excessive engine wear and run time, increases maintenance costs, may lower the residual value of the tractor, and releases unnecessary emissions into the environment. Adding an APU, like the TriPac Evolution, virtually eliminates tractor engine idling, putting more money back in your pocket.

* Based on actual customer experiences. Reduced costs experienced by individual customers will vary.

A COMPLETE SYSTEM

CONDENSER

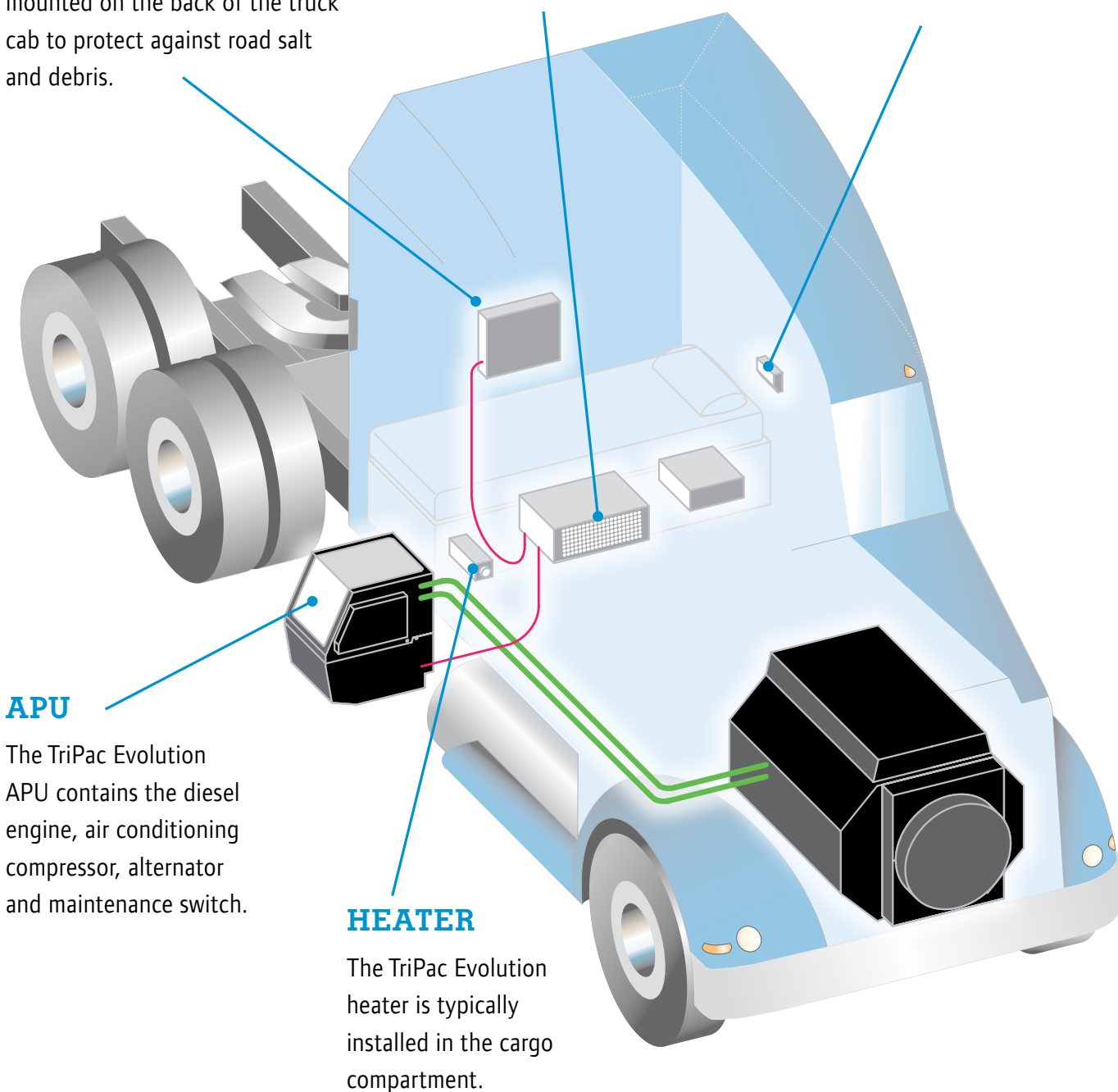
The TriPac Evolution air conditioning condenser is typically mounted on the back of the truck cab to protect against road salt and debris.

EVAPORATOR

The TriPac Evolution air conditioning evaporator is typically installed under the bunk in the truck cab sleeper compartment. Air hoses from the evaporator carry conditioned air to the sleeper compartment.

CONTROLLER

The Human Machine Interface (HMI) controller is installed in the truck cab, typically on a wall in the sleeper compartment.





CHOOSE THE NUMBER ONE APU IN THE INDUSTRY!

UNRIVALED PERFORMANCE

With virtually unlimited heating and cooling and a new control system to accurately diagnose issues, the TriPac Evolution's performance is industry-leading. The control system is flash-loadable and includes a data logger. Diagnostics are improved with 22 alarm codes, and the charging system has been enhanced with amperage-based decision making. The new system gives flexibility to users, allowing customers to focus on fuel consumption, driver comfort or battery life to enhance their needs as appropriate.

EASY OPERATION

Operating the TriPac Evolution is easy. By moving to a three-knob design that aligns with automotive architecture, the need for in-depth operator training has been eliminated.

PEACE OF MIND

Thermo King is the only APU manufacturer to offer nationwide 24/7 service through its world class dealer network. The TriPac Evolution unit's reliability is built on over 160,000 units of experience. The peace of mind offered is priceless.

GREATER FUEL SAVINGS

Programmable settings within the controller means the TriPac Evolution doesn't heat or cool the cab during out-of-service days; it simply monitors and maintains battery voltage and engine coolant temperatures so that the tractor starts dependably.



CONFIGURABLE, EASY-TO-USE IN-CAB CONTROLLER

DATA LOGGER

With 22 alarm codes for improved diagnostics and maintenance cost savings.



FLASH LOADABLE

Both controller and HMI are flash-loadable to allow for future upgrades without new hardware.

ADVANCED RANGE OF PROGRAMMABLE FEATURES

Optimize performance and driver comfort for your business needs.

SIMPLE HMI

Easy-to-use HMI reduces the need for driver training.

PROGRAMMABLE TEMPERATURE CONTROL

Set your desired temperature and the system will automatically maintain the desired setting.

HMI controller is installed in the cab.



THE TriPac EVOLUTION: CASHFLOW-POSITIVE FROM MONTH ONE

Your Idling Hours Annually	\$2.00 A GALLON			\$2.50 A GALLON			\$3.00 A GALLON		
	Tractor Idling	TriPac Evolution	Savings Per Month	Tractor Idling	TriPac Evolution	Savings Per Month	Tractor Idling	TriPac Evolution	Savings Per Month
3,000	\$500	\$72	\$428	\$625	\$90	\$535	\$750	\$108	\$642
2,500	417	60	357	521	75	446	625	90	535
2,000	333	48	285	417	60	357	500	72	428
1,500	250	36	214	313	45	268	375	54	321
1,000	167	24	143	208	30	178	250	36	214
500	83	12	71	104	15	89	125	18	107

DIESEL-FIRED HEATER

The TriPac Evolution is paired with a diesel fired heater making the Evolution the most operationally efficient APU on the market.

EXAMPLE: If you idle 2,500 hours per year with a fuel price of \$2.50 per gallon, you can save up to \$446 per month on fuel alone with TriPac Evolution!

TRACTOR IDLING ASSUMPTIONS

Annual Miles.....100,000
Idling Fuel Cost.....1.0 gph

TriPac EVOLUTION ASSUMPTIONS

	% per year	gph		% per year	gph
Cooling	60%	0.2*	Heating	40%	0.06*

Find your cost per month savings with TriPac Evolution (based on fuel consumption only). Does not include fuel savings from start/stop off time.

*Fuel consumption will vary based on ambient temperature and tractor cab insulation characteristics.



CUSTOM CONFIGURE YOUR TriPac EVOLUTION WITH A WIDE ARRAY OF OPTIONS

BASE TriPac EVOLUTION

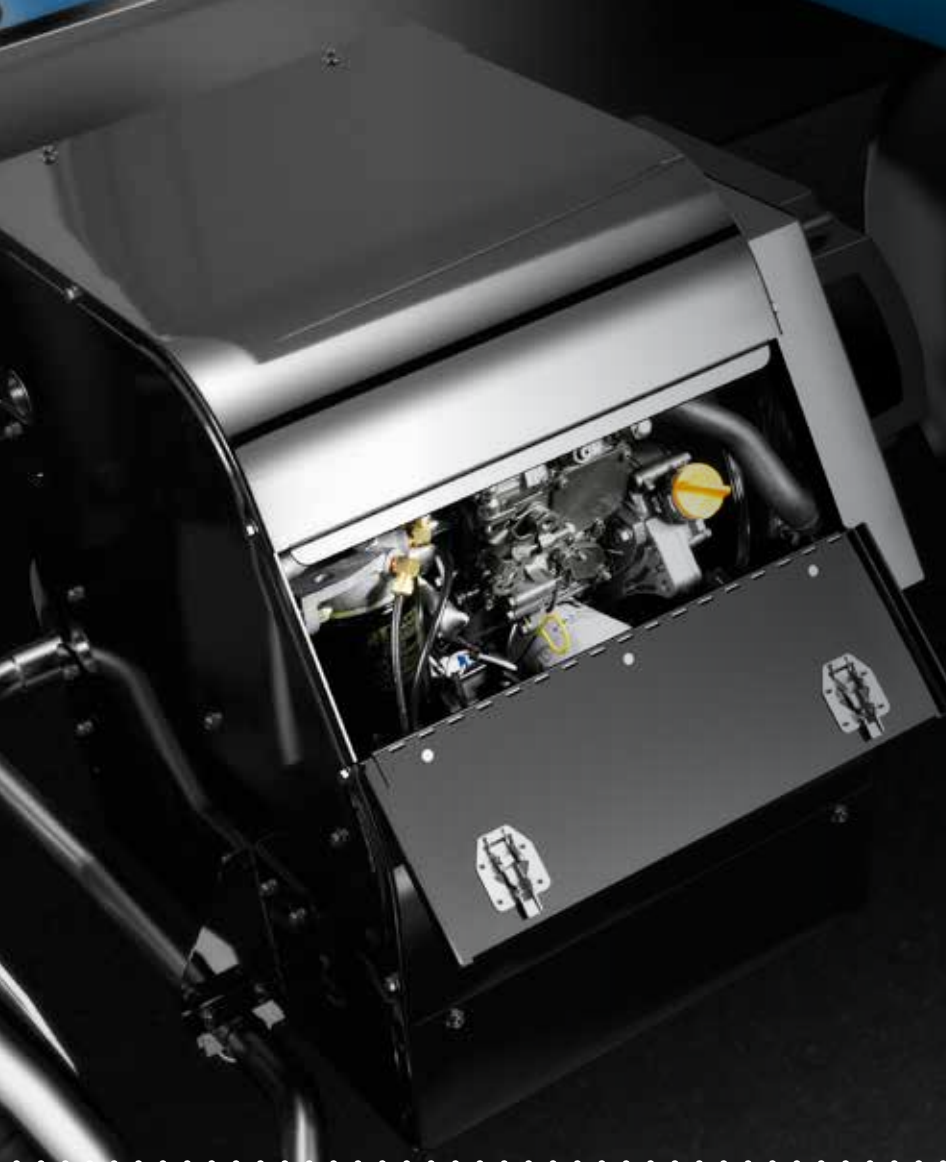
Provides sleeper and cab cooling/heating, battery charging with automatic voltage sensing and has auto start/stop for maximum fuel efficiency.

- 2-cylinder, Tier IV final-compliant diesel engine
- 13,000 BTU air conditioning system including compressor, evaporator, controller (system charged with R-134a at Thermo King dealership during installation)
- 7,500 BTU fuel-powered heater
- Single HVAC controller
- 65-amp alternator
- Thermo King DPF-compatible



OPTION ORDERING GUIDE

- DRIVER CONVENIENCE PACKAGE (073035)**
Includes 1,800 watt inverter and two receptacles. 120 amp alternator provides quicker battery charging under heavy accessory loads. Ideal for supersized sleepers and drivers with heavy appliance usage during rest periods.
- 1,000 WATT PACKAGE (073003)**
- STAND-BY TRUCK INTEGRATION (073015)**
Provides seamless activation of the TriPac Evolution control system based on tractor engine off/on indication.
- STAND-BY TRUCK INTEGRATION WITH DASH-MOUNTED SELECTOR SWITCH (073016)**
Provides the driver the ability to place the TriPac Evolution in a non-start mode (used during tractor fueling, service situations or when exiting the tractor) from the driver's seat.
- DUAL REMOTE HOUR METER (005029)**
Provides separate heater and TriPac Evolution engine time tracking for accurate and effective preventive maintenance. Allows technician to access and record hours of operation without entering tractor cab.
- REMOTE ENGINE HOUR METER (073022)**
Provides engine time tracking for accurate and effective preventive maintenance.
- CLOSED LOOP COOLING (073026)**
Lets the TriPac Evolution run independently of tractor coolant and allows "limp home" capability in case of tractor alternator failure.
- DIESEL PARTICULATE FILTER (DPF) (073027)**
Certified CARB-compliant for operation in the state of California. Standard mount.
- HIGH OUTPUT ALTERNATOR (073023)**
120 amp power for quicker battery charging.
- ARCTIC PACKAGE (073025)**
Monitors tractor engine coolant temperature and automatically starts the TriPac Evolution to heat the shared engine coolant. Reduces cold weather starting issues for the tractor even after extended periods of no operation in cold temperatures.
- APPEARANCE PACKAGE (073036)**
The diamond plate top cover dresses up any rig, moving or standing still.
- BRUSHED STAINLESS STEEL CONDENSER COVER (005011)**
Adds additional corrosion protection as well as that finishing touch.
- EXHAUST TUBE EXTENSION (073030)**
Extension for standard short tube exhaust pipe.
- FLUSH MOUNT KITS (SEE DEALER FOR ORDERING INFORMATION)**
Special mounting kit which keeps the top of the unit flush with the top of the tractor frame rail.
- HIGH OUTPUT HEATER (005018)**
With 13,600 BTUs of heat, this heater will keep you warm on the coldest of nights. With only slightly higher fuel consumption than the standard heater, this option is popular with drivers operating in the northern United States and in Canada.



2,000-HOUR MAINTENANCE INTERVAL

TriPac Evolution was designed with an unequalled 2,000-hour maintenance interval, allowing for maintenance to be performed typically only once per year, aligning better to the tractor maintenance schedule, saving time and eliminating additional downtime for APU maintenance.

Actual maintenance intervals on the TriPac Evolution are even further extended when the auto start/stop function is taken into account. This feature turns the TriPac Evolution on only when needed, saving fuel and reducing the number of hours the unit runs compared to the competition.



**EXPERT SERVICE AND
SUPPORT ARE AS CLOSE
AS THIS SIGN.**

**THE ONLY APU AVAILABLE WITH THE SUPPORT
OF NEARLY 200 FACTORY-AUTHORIZED SERVICE
CENTERS NATIONWIDE!**

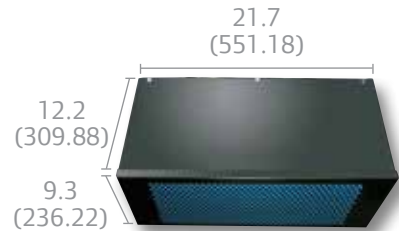
CHOOSE TriPac EVOLUTION AND ENJOY THE SUPPORT OF THE THERMO KING DEALER NETWORK.

SPECIFICATIONS

DIMENSIONS INCHES (MILLIMETERS)



Condenser



Evaporator

DESCRIPTION

The TriPac Evolution provides truck engine preheating, battery charging, truck cab sleeper compartment climate control and electric power.

ENGINE

Thermo King Tier IV final-compliant 2-cylinder diesel engine

EVAPORATOR AIRFLOW

250 ft³/min

ALTERNATOR

14.5V, 65 amp
14.5V, 120 amp (optional)

REFRIGERANT

HFC R-134a

COMPRESSOR

Thermo King QP15HD
Air Conditioning Compressor

AIR CONDITIONING CAPACITY*

BTU/hr	Watts
13,000	3,810

CONTROLS

The TriPac HMI Controller features a simple three-knob design for easy operation.

HEATING CAPACITY

BTU/hr	Watts
7,500	2,200
13,600	3,986 (optional)

SYSTEM WEIGHT (APPROX.)

APU Unit:	345 lbs	(156 kg)
HVAC System:	70 lbs	(32 kg)

WARRANTY SUMMARY

Terms of the Thermo King Limited Express Warranty are available upon request.

EXTENDED WARRANTY

Several Extended Warranty options are available for your TriPac system. Choose a flexible program and select the warranty period, deductible and hours of operation that best meet your needs. Ask your local Thermo King dealer about nationwide coverage plans.

***ARI STD 310/380** - Standard for Packaged Terminal Air-Conditioners and Heat Pumps for the rating conditions of 80F Box, 50% humidity, and 95°F ambient.



Thermo Gard® Assurance

CUSTOMIZABLE FLEET MANAGEMENT OPTIONS FOR YOUR BUSINESS ARE NOW MORE AFFORDABLE THAN EVER BEFORE*

Thermo King SVC's Thermo Gard Assurance guaranteed maintenance program includes set programs and a wide variety of coverage options to fit the needs of your business. And because of the TriPac Evolution's improved reliability and lower maintenance costs, peace of mind is now less expensive than ever!

*Compared to similar guaranteed maintenance program costs for TriPac APUs.



Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a \$13 billion global business committed to a world of sustainable progress and enduring results.



ingersollrand.com

