



THERMO KING

A Matter Of Degrees

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A publication for the over-the-road transport temperature control industry.

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 **THERMO KING**

A Matter of **DEGREES**

A publication for the over-the-road transport temperature control industry.

INTRODUCING



**DESIGNED WITH
ONE SIMPLE
STANDARD:
OUTPERFORM
EVERYTHING**

Thermo King is proud to launch a new trailer product platform that truly is engineered for your business, with no compromises. To ensure this, the platform is three years in the making. It is built from a brand new blueprint... one that is made up of some tried-and-true technologies that were brought to even greater standards, as well as some innovative new technologies that were carefully chosen, tested and proven before

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making the 'final cut.' The result is the Precedent, an industry-changing trailer product line that delivers double-digit fuel savings without the uncertainty of future compliance. To top it off, this is one handsome refrigeration unit.

It's what's inside that matters.

While the skins of the Precedent platform epitomize style, it is the internal components and design that prepares the industry for the future. The 2013 emissions requirement became an opportunity for Thermo King engineers to develop all-new engines that comply with regulations without negatively impacting fuel efficiency. We are offering an evergreen solution that meets the strictest requirements of the 2013 emissions regulation. There is no investing later in costly compliance technologies. A custom EGR solution that meets government NOx emission standards was developed – one that does not pass on fuel penalties to customers.

The innovative fuel injection system is equally impressive. At its core, the S-Series engines utilize a high pressure common rail that elevates fuel pressure to approximately 20,000 psi. While doing so, it delivers optimal fuel injection at exactly the right

time to eliminate particulate matter emissions within the engine cylinder itself. The entire engine runs cleaner and eliminates the need for an expensive, high maintenance after-treatment system like a DPF.

Another key piece to the Precedent S-Series is the reciprocal compressor, a nearly 40-year Thermo King legacy that was improved even more for the new platform. The compressor operation has been slowed down to provide significant fuel efficiencies as well as improved electrical power efficiencies in standby mode.

Diesel Direct Electric.

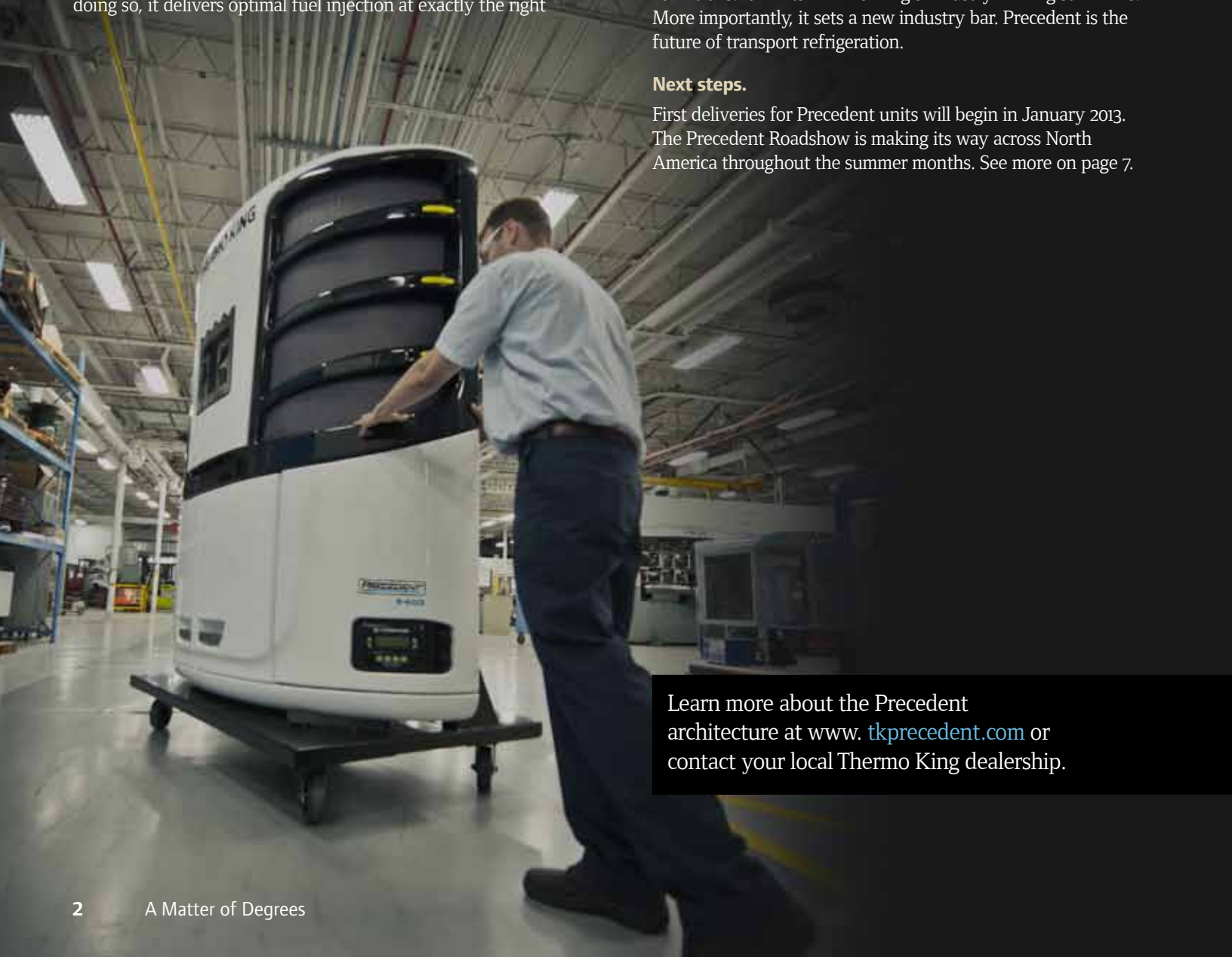
The Precedent platform utilizes an all-new Diesel Direct Electric architecture to drive optimum efficiencies, temperature control, and double-digit fuel savings across real-world applications.

The entire platform provides a range of engine options and configurations that consider all applications – as well as allowing flexibility to upgrade based on particular needs. An array of options allows further customization as necessary.

The Precedent has now been set. The platform was designed to live up to Thermo King's nearly 75-year commitment to provide customers with best-in-class operation, under all conditions. It meets Thermo King's industry-leading standards. More importantly, it sets a new industry bar. Precedent is the future of transport refrigeration.

Next steps.

First deliveries for Precedent units will begin in January 2013. The Precedent Roadshow is making its way across North America throughout the summer months. See more on page 7.



Learn more about the Precedent architecture at www.tkprecedent.com or contact your local Thermo King dealership.

included a powered side gate, custom insulation package and a fully integrated dual refrigeration configuration with shared fuel and electrical systems.”

Individual control boxes for each of the refrigeration units are mounted to be accessible and visible so drivers can easily check status and temperatures of each trailer section. The refrigeration units boast Whisper™ quiet operation and excellent fuel efficiency. They include an electric standby feature that allows connectivity to electric circuits (240 volt) during loading/unloading, which saves on fuel and environmental emissions.

“We couldn’t be more pleased with these unique trailers,” said Siegfried. “The first batch has been running for more than one year now and performing as designed. My vendor team of Thermo King, Utility Keystone and Ryder worked together using years of expertise and experience, to make it all come together.

“Thermo King did the research to ensure the unit configuration would deliver the cooling necessary. Keystone Utility did a phenomenal job in engineering the trailer to host the units. And Ryder Truck Rental, under the management of Steve Williams, made sure the trailers were built in time to meet our deadlines.”

According to Siegfried, GHG Logistics expects a 15-20 percent growth in 2012 so it won’t be long before additional three-zone specialty trailers will be needed.

“This was an amazing project to be part of,” said Karr. “The entire team remained steadfast and positive while determining the right components and appropriate configurations to meet GHG Logistics’ needs.

“In the end, we had one very innovative and serious cooling trailer that satisfies the unique requirements of superior quality sushi.”



COMING TO A CITY NEAR YOU!

Thermo King’s Precedent™ Trailer Platform is making its way across North America to share with the industry just why it truly is the future of fuel efficiency in transport refrigeration. Two custom-made Roadshow trailers will be visiting more than 50 locations throughout June, July and August.

This is one show you do NOT want to miss!

Contact your local Thermo King dealer to learn more or visit www.tkprecedent.com for a complete listing. Locations and dates are subject to change.

WHAT CUSTOMERS NEED TO KNOW ABOUT PRECEDENT

Compliance Choices without Compromising Performance

Precedent delivers industry-leading heating and cooling capacity without the uncertainty of future compliance.

Double-Digit Fuel Savings

The Precedent’s brand new, Diesel Direct Electric architecture is engineered specifically to deliver double-digit fuel savings in real-world applications.

Choices for Today and Tomorrow

A range of product configurations and options allows customers to transition to the new platform, when the time is right, based on the specific needs of their business.

Thermo King Peace of Mind

The industry’s largest and most reliable dealer network, combined with lowest lifecycle cost solutions, ensures that Precedent is the smartest long-term decision a fleet can make.



More information about GHG Logistics can be found at www.ghglogistics.com.

More information about Genji sushi can be found at www.genjiweb.com.

FINICKY TUNA REQUIRES

INNOVATIVE THINKING

GHG Logistics of Allentown, Pennsylvania is an exclusive warehouse/distributor for Genji, an operator of more than 140 sushi bar locations in 18 states, as well as the District of Columbia. It is also the largest sushi vendor within the Whole Foods Market chain. While Genji is known for its superior, Japanese authentic sushi, GHG Logistics is the company that ensures it.

The company manages, stores and delivers the majority of Genji's food inventory. Seamless, uninterrupted temperature holding – from supplier, to warehouse, to trailer, to store—is critical to maintaining the uncompromised, quality ingredients required for Genji's premium sushi.

GHG Logistics' custom-designed fleet of trucks, outfitted with industry-leading triple-temperature trailers (-30 degrees F, 38 degrees F, and ambient), play a vital role in the process. The fleet sustains the temperatures that the company's state-of-the-art warehouse management systems preserve.

GHG Logistics is the first company to use this type of triple-temperature trailer in the USA. The design was made possible through the collaboration of Richard Siegfried, senior manager of warehousing & distribution at GHG Logistics and Utility Keystone Trailer Sales, Inc. of Lancaster, Pa., Ryder Truck Rental of Allentown, Pa., and Thermo King.

"While multi-temperature compartment trailers are common, this one was unique due to the need to hold sushi grade tuna at -30 degrees F. That was the challenge I approached our Thermo King, Utility and Ryder vendor partners with," explained Siegfried. "I knew it could be done. I've been a Thermo King customer for 25 years; the technology was there to achieve our temperature parameters. Making the three, drastically varying temperature zones work together was going to take some major configuring, engineering and teamwork."

Siegfried also needed the trailers within six months. Their success would ultimately save GHG Logistics the costs of adding another distribution warehouse in the south.

As for the design, it was clear early on that a standard multi-temp unit configuration would not work due to the deep freeze temperature needed for the fish. Chuck Karr, sales manager at CSTK East of Philadelphia, GHG Logistics' Thermo King dealer, discussed the issue with Frank Pryzwara, Thermo King district sales manager.

"We were sure our single temp trailer unit could cool to -30 degrees, but we needed a solution for the middle refrigerated section. We were using a dual unit configuration for another customer application and decided to take a closer look at that option," said Pryzwara.

"One of the units was an undermount truck refrigeration model, manufactured in Thermo King's Ireland plant. After running engineering calculations and actual unit tests, we knew we had the solution for GHG Logistics."

The Thermo King duo presented the concept, unit information, temperature calculations, and actual performance test results to the GHG Logistics team for review and approval.

"We went with the SB-230 single temperature trailer unit to achieve the -30 degrees needed for the finicky fish," said Karr. "The unit is mounted to the front of the trailer and deep-freezes the front compartment."




(L-R): Richard Siegfried, senior manager of warehousing & distribution, and Ben Lucas, transportation director, GHG Logistics

"The refrigerated mid-section of the trailer is fitted with a UT-1200X truck unit, specially-ordered from Thermo King's Ireland facility, to maintain the 38 degrees needed for Genji's fresh sushi ingredients. The undermount unit was configured to adapt to the trailer body."

Joe Ritchey, sales manager at Utility Keystone Trailer, was instrumental in leading Utility's engineering group in configuring the trailer to fit the unit.

"Adapting existing technologies and coordinating the engineering staff was difficult during the design phase, but we believed the configuration would work," said Ritchey. "We designed revolutionary modifications that



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www.ikPrecedent.com

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Thermo King belongs to Ingersoll Rand's family of brands, including Club Car®, Ingersoll Rand®, Schlage® and Trane®. Ingersoll Rand is a world leader in creating and sustaining safe, comfortable and efficient environments.

DELIVERING FLEET SUSTAINABILITY THROUGH INNOVATION

THERMO KING PROUD TO PARTNER WITH DELI EXPRESS® SUPPLIER TEAM

Deli Express®/E.A. Sween Company is a family-owned foodservice company with a special interest in conserving natural resources through fleet sustainability. When the company set out to find a way to reduce fuel expenditures and improve its fleet carbon footprint, it turned to several key suppliers for help. Thermo King is proud to be one of the collaborative partners that helped the company achieve its goal.

A Thermo King customer for five years, the Eden Prairie, Minnesota-based Deli Express/E.A. Sween has proved to be a true partner.

“Gregg Hodgdon, head of Deli Express®/E.A. Sween Company’s fleet operations and a certified automotive fleet manager (CAFM), came to us when the company wanted to expand from a traditionally all-frozen transportation fleet with cold plate technology to one with multi-temperature capabilities,” said Dan Vesper, sales representative with Thermo King of St. Paul, the company’s local Thermo King dealer. “It’s been a great partnership from the beginning as Thermo King is just as committed to finding more efficient and sustainable business practices as Deli Express.”

That relationship was a key reason Hodgdon turned to Thermo King when, with the support of fleet management partner Automotive Resources International (ARI®), he began the process of developing an innovative new refrigerated truck

design that could significantly improve fuel economy without sacrificing customer satisfaction.

Deli Express/E.A. Sween Company’s vision was a fuel-efficient, lightweight, and cost-effective refrigerated truck.

The dream team

To make this happen, Hodgdon identified collaboration partners who shared his innovative vision for sustainability and understood the value this project could ultimately drive to his company’s bottom line.

In addition to Thermo King, the final roster included Isuzu for the diesel chassis, Johnson Truck Bodies for the lightweight shell, and ARI for the truck expertise and analytical tools that would help calculate the design’s impact on cost and efficiency.

The four vendors worked in tandem with Deli Express®/E.A. Sween Company to ensure that all required components would work in concert together, and that the combination would ultimately yield the most significant fuel efficiency increase possible.

“Our carefully selected fleet partners bring a higher level of expertise and creativity to fleet sustainability,” said Hodgdon. “Without their support, our company’s sustainability transition would have been far more difficult. We look forward to future collaboration in reducing our environmental impact.”



The technology

Isuzu's ECOMAX features a turbocharged, four-cylinder, 3.0L engine that delivers 150 horsepower and 282 ft.-lbs. torque. This offers plenty of power to move the lightweight body, daily cargo load, and driver effortlessly. Its electronic high-pressure common rail fuel injector system helps to maximize fuel economy. Other notable features include a premium low cab-forward design offering superior visibility and maneuverability; a B10 engine life rating of 310,000 miles; an Aisin six-speed automatic transmission with double overdrive; a 12,000 pound Gross Vehicle Weight Rating (GVWR); a reduced curb weight due to the use of a thinner gauge steel frame; and a base warranty of 3 years/unlimited miles. Learn more at www.isuzu.com.

Johnson Truck Bodies' GuardianLT is larger than previous truck body designs, yet offers unparalleled weight savings. The body is lightweight and durable allowing it to be used several times on different chassis – the true definition of sustainable. In addition, the GuardianLT offers a very high thermal rating which results in reduced consumption of the electricity and fossil fuels needed to keep the body and cargo area at the desired product temperature. Reducing energy consumption also meant lower fleet operational costs for Deli Express®/E.A. Sween Company. More information can be found at johnsontruckbodies.com.

Thermo King's new V-520 RT SPECTRUM™ direct drive refrigeration unit is ideally suited to handle Deli Express®/E.A. Sween Company's requirements for both the fresh and frozen compartments on the truck. It is a multi-temperature, slim line rooftop unit.

An innovative heating system enables productivity gains by allowing specialized thawing applications to occur on the truck rather than in a warehouse. "Previously, Deli Express would have to move frozen sandwiches out of a warehouse to a thawing area each night, and then load the product onto trucks in the morning prior to distribution," explained Vesper. "The V-520 RT eliminates that middle step, providing a leaner operation before deliveries even begin."

The V-520 RT's slim profile roof mount condenser provides the necessary refrigeration capacity while presenting an aerodynamic profile to maximize the overall truck efficiency. The refrigeration system is capable of maintaining the required temperatures throughout Deli Express®/E.A. Sween Company's geographic reach which includes both hot and cold climates.

The SPECTRUM unit uses electric standby to reduce fuel consumption and corresponding emissions. Electric standby also enables rolling warehouse applications where the product is stored on the truck for later sale. The unit also uses a low amount of refrigerant, which reduces its impact on the environment. Visit www.thermoking.com for more information.

Proven performance

Deli Express®/E.A. Sween Company started with two pilot trucks approximately eight months ago. The company now has six ECOMAX trucks in service with 12 more expected to be placed in service as the project expands this year. The vehicles are demonstrating impressive results with nearly 50 percent improvement in fuel economy.

ARI recently analyzed the emissions associated with the ECOMAX trucks compared to other Isuzu NPRs in the fleet. The ECOMAX units are currently emitting approximately 700 pounds less of carbon dioxide on a monthly basis. Extrapolating a similar usage pattern over a 12-month period, the ECOMAX trucks will emit 4.2 tons less of carbon dioxide. These results are proof that it is possible to improve a fleet's carbon footprint through weight reduction and efficient technologies while still utilizing a traditional fuel source.

"The success of the Deli Express / E.A. Sween Company project was due to amazing relationships between the customer, ARI, Isuzu, Johnson Truck Bodies, and Thermo King," said Scott Bates, truck product manager for Thermo King Corporation. "It's so rewarding to be part of a team that simply wants to help the customer operate more efficiently ... and works tirelessly to make it all come together. That's what innovation is all about."



(L-R): Dan Vesper, sales representative, Thermo King of St. Paul; Dan Pelava, account manager, Astleford's International & Isuzu; Jon Schultz, product manager, Johnson Truck Bodies; (Front): Gregg Hodgdon, fleet operations, E.A. Sween/Deli Express

About Deli Express®/E.A. Sween Company

Deli Express®/E.A. Sween Company, founded in 1955, currently has over 850 employees and is a leading manufacturer and supplier of hot and cold sandwiches in the United States. Over 75 million Deli Express® sandwiches are sold every year in more than 26,000 convenience stores, grocery stores, drug stores, vending and other food outlets across the country. Deli Express® route trucks provide direct store delivery in 26 states of Deli Express® branded sandwiches, burritos, bakery and other foodservice programs.

For more information about Deli Express®, visit www.deliexpress.com.