



# A MATTER OF DEGREES

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

Fall 2003

## CAN YOU SEE ME NOW?

### Thermo King's New SmartReefer2 Features Large Screen

*As simple as touching a button, Thermo King's new SmartReefer2™ (SR-2) is designed with not only with your load in mind, but with your state of mind. Thermo King built the controller with the latest technological designs to ensure more consistency and accuracy throughout the trip, and engineered it with years of customer input to improve readability and performance. In fact, it's so easy to use, drivers can now focus on one thing: the road ahead of them.*

Research conducted by Thermo King revealed that customers wanted microprocessor controllers to be user-friendlier. Simplicity was key to customer satisfaction. "Customers said they wanted a microprocessor that was easy to use," said Brian Meagher, Thermo King global product manager, electronics. "The SR-2 numbers are larger, the screen is brighter and the display and keypad are lower for easier access."

Most notably, simple, clear text messages appear with the codes. Set points, customer selectable alarms and system performance monitoring are a few of the selections now appearing in plain English. That is, unless you prefer it in Spanish, French, German or Italian. Like an ATM, the controller offers language options to improve usability and reduce errors.



*continued on page 6*

# ALPENROSE Dairy

Imagine a time when the land surrounding the city of Portland, Oregon was a rolling green farmland. A home to many small-family dairies. Today, pastures where cows contently chew their cud is a distant memory as housing developments and neighborhoods have taken their place. But Alpenrose Dairy remains.

Alpenrose Dairy is a family-run business and full-service dairy, now in its third generation. It is also a landmark in the city of Portland. "When we were growing up we played baseball in the fields. Once we got rid of the cows, we had 60 unused acres in the city of Portland," said Rod Berklund, Alpenrose marketing director. The original baseball fields were joined by a quarter horse racing track and a velodrome for professional cyclists.

Alpenrose is a family destination throughout the year. During the holidays, they host Storybook Lane. Every year at Easter they put on an Easter egg hunt for kids and their moms alike. Alpenrose hides a ring worth thousands of dollars in the field and set the moms loose. It has been a family tradition for generations. "Now people who came here as kids are bringing their own children to the dairy," said Berklund.

Photos: Jim Corbin, Alpenrose Dairy, District Manager



Alpenrose's new SB-400.



The Alpenrose fleet.



A Baskin-Robbins trailer outside Alpenrose Dairy.

Not only is Alpenrose a distributor for Baskin-Robbins, they also produce and distribute their own line of dairy products, from milk to ice cream to yogurt, covering a three state delivery area.

“Alpenrose is 100 percent Thermo King,” said Bill Pascoe, Thermo King Portland. “They run both trucks and trailers and we recently sold them the SB-400. Alpenrose demands a lot from us, but they are a loyal customer.”

“When I started at Alpenrose, we had all different kinds of reefer units,” said Berklund. “Purchasing became my job. I originally bought Thermo King because it was the biggest company in the industry and I began working with Bill Pascoe. We have had virtually no problems with our units and they run forever.”

“There are a lot of advantages to the SB-400. I like the really quiet run. We have a very wide delivery area and our drivers frequently need to stay in hotels. You can leave the unit on all night and it will not disturb the other hotel guests. You can’t even hear the reefer unit running. It has an automatic start and stop,” said Berklund. “I put the new units on the ice cream trucks because, with ice cream distribution, proper temperature is crucial. If the reefer unit breaks

down, the entire load is lost and melts away. Ice cream is a high-value load.”

“We have been quite impressed with the recovery time,” said Berklund. “Say you are going store to store in the summertime delivering ice cream and it takes an hour to unload. If you don’t have good recovery time, it is going effect the quality of the ice cream, causing it to melt and the texture will become grainy. We need to maintain our ice cream at a high quality. That’s possible with the new Thermo King units. They pull down to -20 degrees really fast.”



Trucks ready for delivery.



Outside the Alpenrose Dairy's operahouse.



Welcome to Alpenrose's Dairyville.



The Alpenrose line of products.



# GRANE LEASE DELIVERS RESULTS FOR TOP COMPANIES



*Bud Crane proudly displays the plaque he received after making a hole-in-one with a Thermo King golf ball.*

“We are a family-owned company that prides itself on professional, flexible and friendly supply chain support,” said Allan Grane, Grane Lease president. “Grane Lease is a transportation, warehousing and truck leasing business. Basically, we tailor our services to each account's specific needs.”

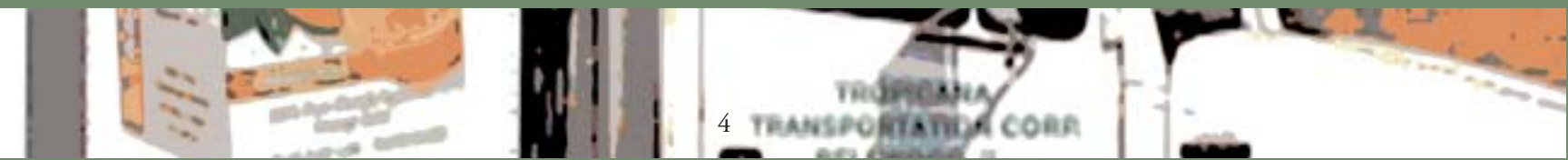
Grane Lease was started in 1925 by Allan Grane's grandfather, Hubert "Buzz" Grane. Headquartered in Chicago, Ill., the company provides dedicated transportation service for Best Buy, dedicated spotting/shuttling/zone deliveries for 3M Corp., warehousing support and truck leasing for Tropicana and dedicated residential deliveries for Pella Windows and Doors. In its 78 years of business, Grane Lease has grown to about 160 employees with 180 pieces of power and 300 trailers. The trucks in the fleet vary, but most are Freightliners, Sterlings, and Internationals. Grane Lease has been a Thermo King customer since they earned the Tropicana account approximately three years ago. Now they house 30 Thermo King units all of which are TS-300s.

“The guys at Illinois Auto Central (IAC), Jerry Kerins and Andy Marco, sold us on the TS-300s. We chose Thermo King because of the dependable product and great service and support,” said Grane. “Tropicana is a Carrier Fleet nationwide except for Chicago. So hats off to IAC.”

Grane Lease looks forward to continued growth in this market. “We think that our variety of services are unique to Chicago. We are also an opportunistic company. We really were not involved in refrigerated service before the Tropicana account,” said Grane. “Now we see this as a real opportunity for growth and we are aggressively exploring other refrigerated accounts to compliment our ‘one-stop-supply-chain support’ credo.”

“Grane Lease accepted the challenge of Tropicana, Chicago,” said Jerry Kerins, Thermo King sales representative. “In short order they acquired Thermo King equipped trucks, logistic support and warehousing facilities. They are truly great people to work with.”

Early in organizational meetings, Jerry Kerins presented Bud Grane with a gift of Thermo King logo golf balls. A month later while visiting the Grane Lease facility, Bud Grane proudly displayed a new plaque. “He had hit a hole-in-one with a Thermo King golf ball,” said Kerins. “Bud was excited about this accomplishment and so was I. I have never heard of any one else hitting a hole-in-one with a Thermo King golf ball. This was a great way to start a relationship with a new account.”



# COLDSTAR FREIGHT SYSTEMS AND R:COM



The drivers at Coldstar Freight Systems walk on water everyday. It's nothing unusual for them. To get to their destination, from metropolitan Vancouver to Vancouver Island, they travel by boat.

Coldstar Freight Systems' primary business is the transportation of fresh and frozen food products, which serves the island's 500,000 residents, mostly in and around Victoria. The fleet travels across the Strait of Georgia on the British Columbia ferry system daily.

"We wanted to monitor the temperature not only on the docks, but all the time," said Kelly Hawes, Coldstar Freight Systems president. "The drivers stay with the trailers and trucks at all times. We are like FedEx, all the deliveries are made within 24 hours. It's overnight delivery."

## 100 PERCENT THERMO KING

Coldstar is a 100 percent Thermo King customer. Coldstar recently moved into a new cold storage facility in Victoria and installed Thermo King's R:COM™ system on all of their trailer units.

R:COM is a radio-based, local-area network which is used as an effective traffic management tool. R:COM instantly identifies and communicates vehicle arrival and departure times, availability in yard, type and registration, as well as refrigeration unit model, operating and temperature data, alarm conditions and any actions required.

The R:COM System provides a virtual wire connection between a Thermo King SmartReefer™ or datalogger and an office, eliminating the time-consuming, manual download of data from each vehicle's datalogger. The system works automatically and is perfect for distribution companies. R:COM provides wireless downloading of data, in-yard monitoring, traffic management, and immediate communication of action required to a mobile phone or pager.

## THE NEXT GENERATION

"R:COM is the next generation in wireless communications for distribution companies," explained Brian Meagher, Thermo King global product manager, electronics. "The key benefits to customers are wireless downloading, equipment monitoring and traffic management. R:COM continuously communicates vehicle arrivals and reefer status – notifying workers of any alarms that need attention. It gives distribution companies the information they need to not only appropriately document temperatures during trips, but also to get vehicles back on the road quickly and requires no human intervention."

There are three pieces to the system. The first is the base station receiver, which is mounted to a building and connected to an office PC and R:COM software. Second is the R:COM vehicle-mounted module, which is connected to the SmartReefer™, or datalogger, to download operation data. R:COM relay units make up the third component of the system; essentially extending the communication reach of the network.

## COLD CHAIN INTEGRITY

"It is important to maintain the integrity of the cold chain, not only for our customers but for ourselves," said Hawes.

The software component, or R:COM network manager, is the workhorse of the system. Operating on its own, the manager periodically broadcasts a query to detect recently arriving mobile units, logs them into the network, downloads data (if applicable) and relays other actions required including alarm conditions. If immediate attention is required, the system can automatically send an alert message via a flashing icon on a computer screen, an audible signal, an email, or a message to a mobile phone. Through this interface with the R:COM system users can monitor the status of the radio network and the mobile units connected via module currently within range.

## PREVENTIVE MAINTENANCE

"We have been impressed with the R:COM. We see it as a valuable asset. The warning system is good because it tells you when something is wrong. R:COM is a great tool for preventive maintenance. It makes scheduling maintenance easier because you can do a yard check right from your office," said Hawes.

Coldstar Freight Systems delivers to every grocery store on Vancouver Island. They have the largest public cold storage on the island measuring 35,000 square feet and have the capacity to store at -35 degrees F. They can store up to 3,000 pallets in their freezer. Their business is solely in refrigerated food and they average 10 to 15 pickups a day. They use Thermo King Whisper™ Editions, SB-200 and SB-300 units. Their fleet has 17 trucks and 8 trailers.

Neil Tamppari, Thermo King district service manager, has worked very closely with Coldstar Freight Systems on the implementation of R:COM at the new Victoria facility. "This technology allows our customers to maintain a watchful eye on the equipment and identify service issues as soon as they arise. By early identification, the customer has the ability to resolve service issues before they result in costly breakdowns on the road."

## can you see me now?

*continued from cover*

“Companies with high driver turnover will really appreciate the simplicity,” said Doug Lenz, Thermo King trailer product manager.

### Enhanced diagnostics

Understanding and responding to alarm codes is critical to protecting loads. The SR-2 includes a comprehensive listing of alarm codes with text descriptions. “Before, when an alarm code was triggered, drivers had to review the code, identify the code and call the dispatch office, often multiple times during one trip,” said Meagher. “And now that text descriptions accompany these alarm codes, drivers can troubleshoot problems themselves.”

A built-in maintenance datalogger with optional temperature logging features a precise, two megabyte recorder as a standard component. From the time cargo is loaded until it reaches its final destination, the SR-2 can log the history of the trip including set point, temperature control sensors, system pressures, operating modes and alarms.

### Ergonomically designed

“Improved ergonomics was also important to customers,” said Lenz. “We worked hard to make the SR-2 better on the inside and on the outside.” A large LCD screen with adjustable brightness makes it easier to read in low or even no light. A new angled display reduces glare. The lower display and keypad provides easier access.

### Advanced security and load protection

The SR-2 provides special features to protect loads. The keypad can be locked to prevent interference and a “mode-lock” prevents accidental selection of the wrong temperature band. For units equipped with electric standby, an automated diesel/electric auto-switching feature continues protecting cargo even if the electric supply is interrupted. Audible and visible warnings alert the operator of potential problems.

The controller is fully compatible with other telematics products such as R:COM™ and i-Box™.

The SR-2 will be phased into the SB Series of units, as well as the Super II refrigeration units.



# MD-200 and MD-300

Proven reliability, unbeatable quality. Thermo King reintroduces the MD-200 and MD-300, with reduced maintenance costs through EMI 2000 and a comprehensive two year warranty. They have the same reliability and performance that has come to be expected with a Thermo King new design.

At the core of the MD-200 and MD-300 is the X214 Deep Sump two-cylinder compressor. This high capacity compressor is considered to be the most efficient reciprocating compressor in the industry, delivering optimum pumping and cooling capacity. It is also the cleanest burning, most fuel-efficient and quietest running engine available. Another benefit to Thermo King's MD-200 and MD-300 is the unique exterior design, which makes for easy accessibility. Designed for rapid and full access to the engine compartment, individual panels can be removed and replaced instead of the entire skin in service operations.

An exclusive feature in all Thermo King SmartReefer™ units such as these is the proven TherMax™ heat and defrost system. TherMax is simply a better way to generate more heating capacity when it is needed. The SmartReefer also delivers superior air flow. It incorporates two high-output, belt-driven fans that are powered by the system's diesel engine. Superior air circulation provides faster box temperature pull-downs, faster recoveries after door openings, minimal temperature fluctuations and the virtual elimination of hot spots and short cycling.

The MD-200 and MD-300 refrigeration units have combined the proven reliability and unbeatable quality of the popular KD-II SR and MD-II SR with an updated skin that screams innovation and sleek, beautiful style.

“Basically, we're matching the outside looks of the units with the power and technological savvy that already defines the inside features,” said Laurie Rengel, global product manager, self-powered truck.



Thermo King introduces the reliable V-500 series. It features enhanced performance with optimal control. The V-500 series presents customers with the ultimate performance while using less fuel and keeping noise to a minimum. It also offers improved capacity and airflow to ensure a superior temperature distribution to protect the product load, as well as shorter pull-down and recovery time to guarantee product quality. The electric stand-by capacity is 85 to 95 percent of the road capacity at any working condition resulting in maximum protection of the load at any time.

The V-500 series also offers the new exclusive Triple Cooling Capacity (TCC). This feature offers you three cooling capacities and fan speeds to automatically match cooling intensity to varying needs. The TCC level is adjusted according to the pressures read within the refrigeration circuit.

It also offers various options to suit whatever need, including R-134a, R-404A, stand-by operation, bi-temperature, heating and the choice of road compressors.

Guaranteeing reliability, the road compressor offers a five-times longer life, semi-hermetic reciprocating stand-by compressor, electrical components protected from water and humidity inside a hermetic box. The new TCC control system also reduces the working time of the condenser fans.

# V-500



# SB-210

The SB-210 is a microprocessor-controlled, high-capacity, frontmount, diesel-powered, temperature control unit with directional air delivery for today's jumbo trailers. It offers reliability, uptime, system efficiency, temperature management and ease of use, with decreased maintenance costs, fuel costs and noise.

The SB-210 is easier to use and improved management, diagnostics, safety and security features reduce operating costs. And most importantly, it ensures the delivery of quality cargo.

The powerful, advanced SmartReefer2™ (SR-2) controller will be featured on the SB-210 series. This controller offers simplicity and ease of use. It includes a built-in preventative maintenance logging standard. This feature provides improved diagnostics, keeps track of system performance and functionality and records all operational parameters.

With the SR-2, it is now easier than ever to perform a yard check. This is because the SR-2 provides an enlarged splash screen with an oversized display of the box temperature and a smaller set point indication. With just a glance, a driver can verify if the equipment is functioning correctly.

The SB-210 with the SR-2 controller has superior diagnostics to identify and respond to problems. The diagnostic system includes a comprehensive listing of alarm codes with text descriptions, customer-selectable alarms and a service test mode. Increasing product load security, the SB-210 offers advanced functions such as a keypad with lock-out, mode-lock, phase-correction, diesel/electric auto switching, set point warning and return or discharge air control.

The SB-210 offers true fuel saving without sacrificing performance. Less fuel is consumed in all ambient conditions, whether hauling fresh or frozen. Its advanced engine and control technology provides a cost savings and improved performance that is unmatched in the industry.



## **CRYO-TRANS STAYS ON THE RIGHT TRACK**

CRYO-TRANS, Inc.® was established in late 1985 to address a critical issue that confronted the ever-expanding frozen food industry in the 1980s: The declining availability of mechanical refrigerated railcars owned and/or operated by the nation's railroads. The decline in availability was the result of the high cost incurred by the railroads of maintaining and repairing the mechanically refrigerated railcars. As a result, finding an alternative to the mechanically refrigerated railcar became an industry top priority.

Since its inception, CRYO-TRANS has evolved into a major 100-ton capacity refrigerated car source with its patented CO<sub>2</sub> railcar refrigeration technology. By the year 2000, the fleet of railcars operated by CRYO-TRANS represented over 10 percent of the nation's refrigerated railcar fleet. The CRYO-TRANS mission is "Protecting Today's Perishables for Tomorrow."®

In the last two years, as the use of CRYO-TRANS refrigerated rail cars increased, CRYO-TRANS developed a Railcar Management Program to provide customers with a proactive Fleet Management System. It soon became apparent that a more sophisticated web-based Fleet Management System was needed in order to maximize revenue and provide customers with additional services and capabilities.

### ***On the Forefront of Technology***

"Basically in railroading, you can't do without the technology," said Ruth Beauchamp, CRYO-TRANS fleet management director. "We were already familiar with and using the technology but we were interested in working with one supplier."

In evaluating solutions to meet CRYO-TRANS requests for improving the productivity and asset utilization of fleet operations Thermo King found that the current solutions were manual, expensive, error-prone, not real-time and compromised cargo security. "We also found that current solutions provided little to no ability to actively monitor, manage and control fleet assets from a central location. Many of the systems were based on a specific communications protocol and unique hardware. They were closed architectures without the flexibility to customize or scale to growing customer needs and involved development efforts of 18 months or longer," said Brian Meagher, Thermo King product manager, electronics.

### ***Introducing Trac-King™***

Thermo King introduced Trac-King: an innovative Fleet Management System that uses the power and flexibility of today's wireless communications technology and the Internet to provide customers the ability to real-time monitor and track mobile units within their transportation fleets. Through the use of satellite and Internet technology customers can also interact and control the mobile units 24 hours a day, 365 days a year.

"We noticed that Thermo King was very receptive to finding solutions. They worked very hard to understand the rail industry. When we have had a problem they have put their best foot forward to solve it," said Beauchamp.

### ***The Trac-King Advantage***

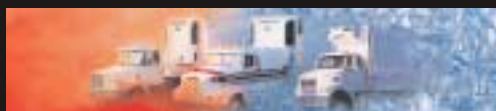
Advantages of the Trac-King system include enhanced fleet utilization, increased state of readiness and improved logistics/ETA

information. An enhanced utilization of a fleet is obtained through knowledge of asset location, status, and availability for taking on a new load. This capability enables dispatching and logistical optimization. Significant increases in asset availability are realized through proactive measures based on specific information obtained from an asset during transit.

"With Trac-King we have improved the transition time. Thermo King designed the screen display specifically for CRYO-TRANS. We told them what type of information we wanted to see on the screen for the rail industry. We use all facets of what is available to us," said Beauchamp.

Refrigeration units are controlled to perform pre-trip diagnostics and defrost cycling prior to arrival for loading. Performance trending and fault information is routed to appropriate individuals before an asset arrives at a service facility in order to reduce downtime and perform preventive maintenance. Information on all cargo access is monitored through the collection of location, time and date of entry into cargo bay. Real-time alerts are provided to appropriate personnel for pre-determined conditions. Information about detailed trip logistics, cargo conditions and estimated arrival times is collected.

"The major advantage for us is that the manufacturer is the provider, there is no third party," said Beauchamp. "You can call one place and get your question answered."



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