



APX[™]
CONTROL SYSTEM

HUMAN



INTELLIGENCE.

Powerful technology for refrigeration.
Amazing convenience for people.

APX™ CONTROL SYSTEM

Vitruvian Man is a blend of art and science that represents the balance between humans and their surroundings.

Today that balance is more critical than ever. The pace of business is faster, customer requirements are more demanding, and technology plays a critical role in fleet logistics, quality control, and profitability.

Balance

As technology becomes more powerful, it can become more complex, at a time when your business needs it to be faster and easier to use.

Enter the APX™ Control System from Carrier Transicold.



Our APX Control System helps you realize the ideal balance between technology and convenience. It combines future-forward technology with a people-friendly design. The result is remarkable control intelligence and system reliability with amazingly simple operation.

HIGH TECH.



HUMAN TOUCH.

Hardware: Reliability

As the industry's first decentralized control system, the APX Control System eliminates the single, large control box and replaces it with automotive-style compact modules using CAN-bus communication.

Strategic and efficient hardware placement dramatically reduce the size of the electrical system. A simplified system design with fewer components means higher reliability to help keep your equipment on the road.

Software: Intelligence

Sophisticated software and temperature control algorithms maintain an ideal environment inside the trailer, so you can focus on delivering the highest-quality products on time.

New Carrier Transicold Reefer Apps™ offer expanded functionality and value-added features to streamline your operations. Because not only do you have to deliver goods at the right temperature, but in a fuel-efficient, cost-effective manner too.

Humanware: Simplicity

All the power of the APX Control System is amazingly simple and intuitive for drivers, warehouse personnel, and technicians to use.

A large dashboard-style display shows all key operating information, providing an at-a-glance visual indicator of both unit operation and conditions inside the trailer.

An ATM-style interface and exclusive message center with over 300 messages walk users through unit operation in their choice of language.

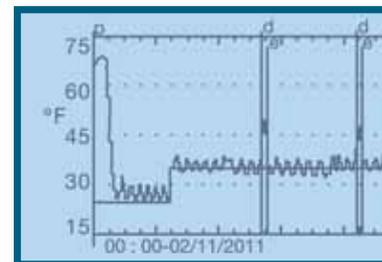
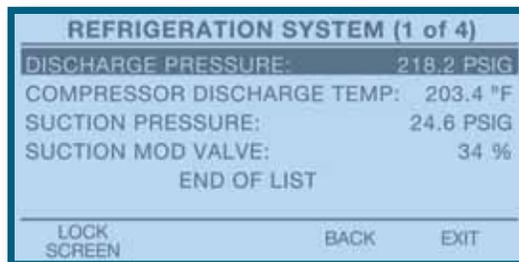
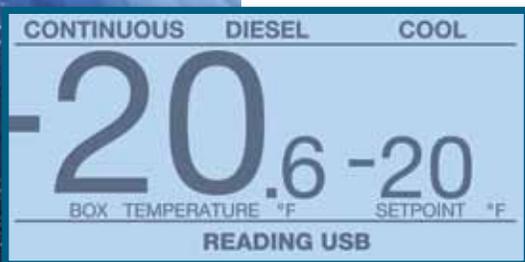
APX is high-tech.
For heads-up control performance.



Everything you need. Where you can see it.

A bigger, brighter graphical display and large, backlit buttons make control operation more convenient than ever. Large fonts and an automatic dimming feature quickly confirm cargo safety, day or night.

- ▶ Thoughtful design and an ATM-style menu system simplify operation.
- ▶ Delivers five times more information with up to 80% fewer keystrokes than other systems.



Accessibility

Need information? Check the dashboard.

The information dashboard is another unique feature of the APX Control System display module. It shows multiple pieces of information on the same screen, at the same time, so you don't have to toggle back and forth between screens.

- ▶ For example, with only a few keystrokes, you see all the engine operating parameters or all the trailer temperature probes simultaneously.
- ▶ Graphical display provides an instant visual report of temperature activity within the trailer—an APX Control System exclusive.



Save time, money and fuel.

The APX Control System builds upon the sophisticated, proprietary software algorithms developed by Carrier for the highly successful Advance™ microprocessor.

- ▶ Exceptional temperature control and fuel economy.
- ▶ Unique compressor protection logic.
- ▶ Proven reliability and performance.

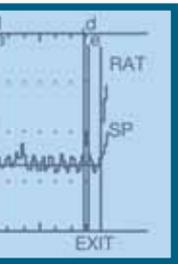
Special needs? Custom solutions.

APX Control System application software programs make your life easier. And make your business run smoother. Reefer Apps™ offer value-added functionality to your fleet.

Add apps to reduce fuel consumption, run time, maintenance costs, and greenhouse gas emissions. Or add apps to track assets, improve temperature management, or increase fleet efficiency. Check with your Carrier Transicold dealer for updates on this ever-expanding lineup.

REEFER APPS™

Ready to go. Ready to grow.



Flexibility



IntelliSet™
Select custom profiles to balance cooling and fuel economy for a variety of commodities.



ProductShield™
Monitors ambient temperature to optimize box environment.



Range Protect
Select two setpoints to control when unit runs, for maximum efficiency.



DataTrak™
Provides one- or two-way remote monitoring and control.



FuelCheck™
In-tank ultrasonic sensor provides low-fuel alert for drivers.



Virtual Tech™ Mode
Continuously monitors the entire TRU to ensure optimum performance and reliability.



AFAX
Automatic Fresh-Air Exchange vents air to remove ripening gas.



Door Man™
Monitors door switches and adjusts unit operation to save fuel.



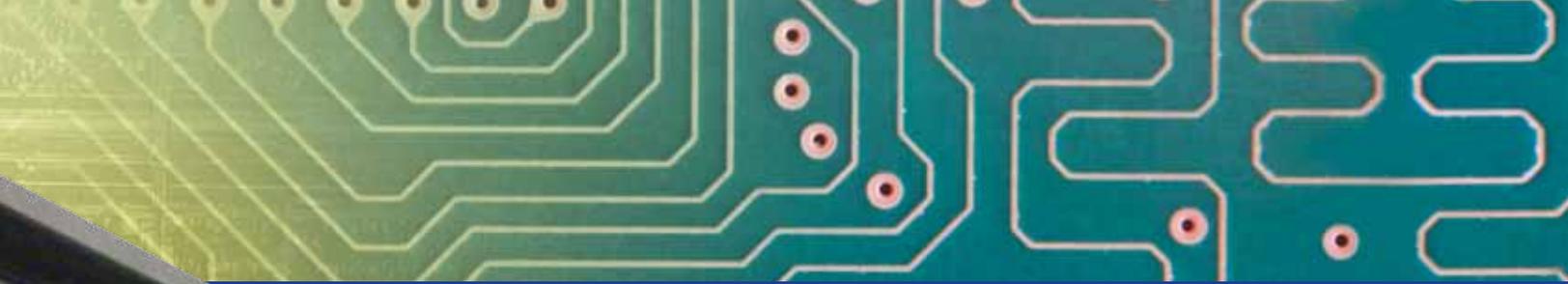
Driver Mode
Simplifies operation, locks out advanced control functions.



Sleep Mode
Keeps refrigeration system at readiness during inactivity.



Rail Mode
Configures unit for unattended rail or intermodal operation.



New technology should never get old.

Electronics and software are evolving at a rapid pace. You don't want an asset that's stuck in time. The APX Control System's future-forward design helps keep you current.

- ▶ Software and specialized Reefer Apps can be quickly and easily upgraded via the USB port to add functionality and keep older units running like new.
- ▶ CAN-bus (Controller-Area-Network) connectivity integrates internal systems; has the potential to connect to other vehicle systems.
- ▶ Daisy-chain connectivity between modules allows easy unit upgrades to add functionality, such as a wireless communication module.
- ▶ Electric harness contains all connections for future upgrades.

Ingenuity

USB Data Transfer



The data to drive solutions.

Managing data is more important than ever as customers demand proof-of-delivery or temperature-control records. And as fleets monitor assets for logistical efficiency, theft, tampering, or maintenance, the APX Control System helps fleets collect and manage comprehensive operating data efficiently.

- ▶ Integrated data recorder with six times more memory than its predecessor.
- ▶ Integrated USB port improves speed of data downloads. Includes PIN code for data security.
- ▶ TRU-Tech™ and TRU-View™ PC software provide simple access to data for record-keeping, troubleshooting, and analytics.
- ▶ Integrated telematics; plug-and-play capability with approved providers.



APX is human touch. For hands-on operating simplicity.

Thinking outside the box.

The APX Control System takes a fresh approach by using distributed electronics in a completely modular system, similar to automobiles and heavy-duty trucks.

The control system, formerly crowded into a single, large box, is now divided into individual, compact, NEMA weather-sealed modules.

More efficient placement of hardware components reduces complexity, for greater reliability.

Simplified, more-efficient wire routing. The APX Control System harness weighs 40% less than its predecessor.

Fewer electrical connectors and components.

Power Control Module



Expansion Modules



Main Micro Module



Display Module

Like having a ride-along tech.

On-board diagnostics help you detect and avoid operating issues before they can become problems. The APX Control System conducts a fast, thorough pretrip inspection, detecting faults down to the component level.

- ▶ Performs electrical and mechanical checks, including compressor pump-down and leak check, in about eight minutes.
- ▶ On-board Virtual Tech app continuously runs in the background, monitoring the entire control system. If a problem occurs, Virtual Tech indicates which module needs replacement, minimizing labor, time, and cost to get you back on the road and running.

Modularity



APX. The most advanced control system.
Since Advance.



The APX Control System advances the art and science of transport refrigeration control. The ease-of-use and flexible performance capabilities pioneered by Carrier for the renowned Advance™ microprocessor are elevated to the next level with an interactive dashboard, more Reefer Apps and outside-the-box modular architecture.

When equipped with the exclusive APX Control System, Carrier refrigeration systems offer the latest in reliability, flexibility, temperature control, fuel efficiency, and user-friendly operation.

The APX Control System makes the industry's most versatile trailer refrigeration systems more powerful than ever.



Turn to the Experts.

At Carrier, we build products that set the industry standard for performance. Our dealers set the industry standard for support and service.

No one is better trained or better equipped to deliver the convenient service and technical support you depend on to keep your refrigeration systems performing at their peak.

Wherever you are, wherever you go, turn to your local experts for all your transport refrigeration needs.



North America
Carrier Transicold
700 Olympic Drive
Athens, GA 30601 USA
Tel: 706-357-7223
Fax: 706-355-5435

**Mexico and
Central America**
Ejercito Nacional 253-A Piso 5
Col. Anahuac
11320 Mexico, D.F.
Tel: (5255) 5531-5010
Fax: (5255) 5531-5101, ext. 1005



Carrier

A United Technologies Company

Carrier Transicold Division
Carrier Corporation
Truck/Trailer Products Group
P.O. Box 4805
Syracuse, NY 13221 USA

www.trucktrailer.carrier.com