

# Maximizing Confidence in Temperature-Controlled Pharmaceutical Shipping

A Marketing White Paper

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## Pharmaceuticals Require Strict Temperature Controls

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Pharmaceutical products are considered one of the fastest growing and most valuable cargo commodity categories handled by air carriers. It is estimated that biotech and pharmaceutical products represent the highest value per air lifted pound of any cargo shipped by the airlines. And taking into account that many temperature-sensitive pharmaceutical products will at some point during the distribution process travel by air, the significance of maximizing shipper confidence in every aspect of the quality and reliability of the shipping process is of utmost importance.

Pharmaceutical industry confidence in air cargo can be further gained by using state-of-the-art equipment packaging and containers, tracking systems and highly-trained personnel. Processes that provide detailed documentation or proof that these sensitive products have been well-maintained throughout the shipping process allow pharmaceutical companies the control they need to manage their products effectively.

Protecting these valuable assets with proven, precise handling and strict temperature-control can literally save companies millions of dollars in lost inventory. This is also ultimately essential for protecting patients and end-users of the pharmaceutical products.

Therefore, it is imperative for pharmaceutical companies, freight forwarders and air carriers alike to understand and overcome the challenges of cost-effectively delivering high-value, temperature-sensitive pharmaceuticals across widely varying climates to their customers worldwide.

## Requirements-Driven Approach

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The International Air Transport Association (IATA), which promotes safe, reliable, secure and economical air service practices, has developed additional regulatory requirements for the handling of temperature-sensitive pharmaceutical products. Effective July 1, 2007, the IATA published a separate chapter to its 7th Edition of the Perishable Cargo Regulations, specifically addressing air transport logistics for temperature-sensitive healthcare products, changing its previous passive guidelines to a more strict requirements-driven approach.

The IATA regulations for the air transport of temperature-sensitive pharmaceuticals were carefully developed using the following information:

- Scientific data from research institutions, and field experience from major airlines and freight forwarders
- International and local regulations for goods shipped and stored under optimal conditions in on- and off-airport locations from key pharmaceutical companies
- Comprehensive classification of perishable commodities, including temperature/humidity requirements, packaging references and incompatibility/segregation information
- Airlines contact information, dedicated websites, and specific rules regarding perishable cargo
- Pharmaceutical product information based on World Health Organization (WHO) guidelines

Additionally, pharmaceutical and biotech materials are closely governed by specific federal requirements that must to be observed, including growing requirements for more advanced equipment, permits, and training in order to move medical material and pharmaceuticals.

With the growth of pharmaceutical manufacturing internationally, it is increasingly common for a drug to start as an active pharmaceutical ingredient (API) and go to a finished product in multiple steps across multiple countries. As a result, the requirements have increased for packaging, storing, transporting and distributing pharmaceutical ingredients and finished products. The shipping process must be as reliable and sophisticated as the manufacturing process for these products.

## **Proven Reliability in Handling of Pharmaceutical Shipments**

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Built on the proven service reliability of American Airlines Cargo's *Expeditefs* express freight product, American's *ExpediteTC* service was developed to deliver a highly-reliable, temperature-controlled service. Successfully tested in 10 U.S. and international cities before its worldwide launch, *ExpediteTC* offers customers specialized handling, monitoring and tracking of sensitive pharmaceutical shipments. AA Cargo's *ExpediteTC* service is available at more than 100 cities throughout its worldwide cargo network.

AA Cargo has collaborated with specialist container manufacturer, Envirotainer, a company that is known as a pioneer and leader in developing active temperature-controlled air transportation solutions. These containers help to keep product temperatures stable despite fluctuations in the ambient temperature during shipping.

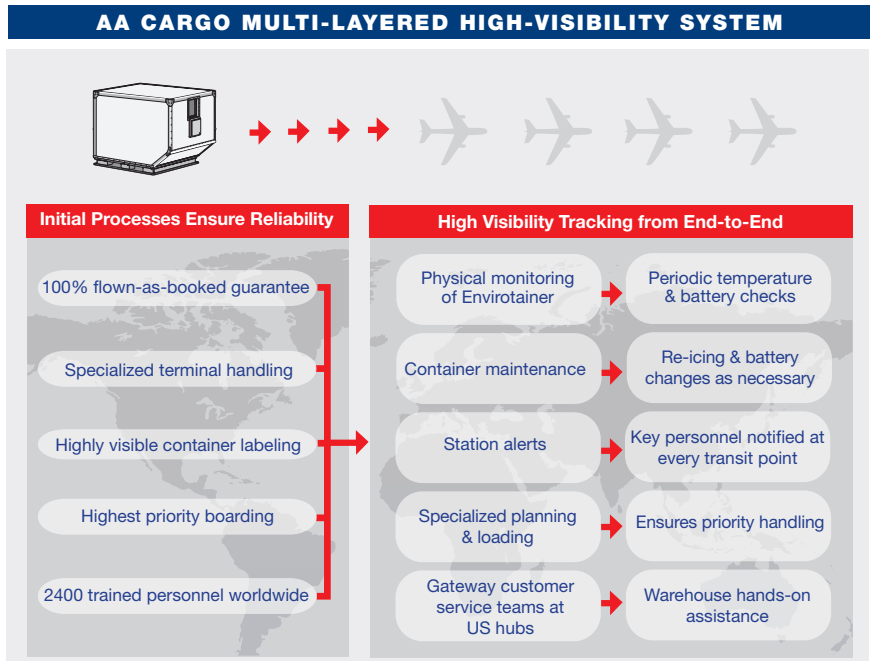
## Multi-Layered, High-Visibility System

AA Cargo has implemented a high-visibility, multi-layered tracking program for ExpediteTC, which guarantees all temperature-sensitive shipments are closely monitored. ExpediteTC is a program that delivers the specialized air cargo expertise needed by the pharmaceutical industry with all system layers supported by a team of highly trained professionals that have the commitment to deliver ongoing superior service.

AA Cargo has also developed innovative internal systems that ensure efficient and reliable handling of temperature-controlled ExpediteTC shipments. These systems enable cargo teams to thoroughly monitor temperature compliance.

With this system, AA Cargo is able to provide high-visibility monitoring and unique tracking of the high-value shipment. Because the pharmaceutical industry is facing more regulation than ever before, AA Cargo has implemented standardized processes and procedures that support customers with their regulatory requirements of tracking shipments to ensure that they have been transported under the correct conditions.

Meeting or exceeding their needs, shipments are closely tracked and supervised by knowledgeable service teams. Customer-prescribed Standard Operating Procedures are put in place, which involve high-visibility watch and proactive tracking from end to end. The teams closely monitor the temperature and provide for maintenance services such as re-icing and battery replacement when needed.



Careful handling also includes blue special tags that make these crucial shipments easily recognizable to personnel loading the aircraft.

## Worldwide Accreditation: 60 Cities in 24 Countries

By working closely with shippers of healthcare products and understanding their requirements, AA Cargo has implemented the logistical procedures, equipment and training required to receive Envirotainer’s QEP (Quality Envirotainer Provider) accreditation in 60 of its key global locations throughout 24 countries. This represents one of the strongest temperature-controlled cargo solutions in the industry. QEP accreditation provides customers with assurance that the handling of their shipments in each of these locations will meet industry guidelines for temperature-sensitive healthcare products set forth by the pharmaceutical industry.

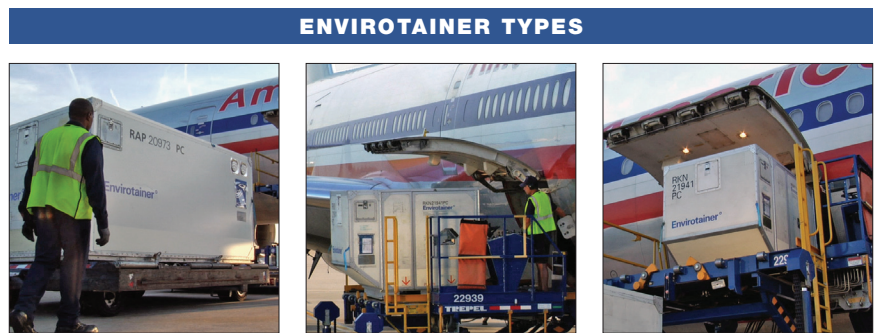
QEP Envirotainer® / ExpediteTC: Cities Served List				
International Cities			USA Cities	
Country	City	Station	City	Station
Argentina	Buenos Aires	EZE	Atlanta	ATL
Belgium	Brussels	BRU	Austin	AUS
Brazil	Rio de Janeiro	GIG	Hartford	BDL
	Sao Paulo	GRU	Boston	BOS
	Viracopas	VCP	Cleveland	CLE
Canada	Montreal	YUL	Cincinnati	CVG
	Toronto	YYZ	Denver	DEN
Chile	Santiago	SCL	Dallas/Ft. Worth	DFW
China	Shanghai*	PVG	Detroit	DTW
Colombia	Bogota	BOG	El Paso	ELP
Costa Rica	San Jose	SJO	Newark	EWR
Dominican Rep	Santo Domingo	SDQ	Houston	IAH
	Santiago	STI	Indianapolis	IND
Ecuador	Guayaquil	GYE	New York	JFK
France	Paris	CDG	Los Angeles	LAX
Germany	Frankfurt	FRA	Laredo	LRD
Guatemala	Guatemala City	GUA	Orlando	MCO
Ireland	Dublin	DUB	Mc Allen	MFE
Italy	Rome	FCO	Miami	MIA
	Milan	MXP	Milwaukee	MKE
Japan	Tokyo	NRT	Minneapolis/St. Paul	MSP
Mexico	Mexico City	MEX	Chicago	ORD
Peru	Lima	LIM	Philadelphia	PHL
Spain	Barcelona	BCN	Phoenix	PHX
	Madrid	MAD	Louisville	SDF
Switzerland	Zürich	ZRH	Seattle	SEA
United Kingdom	London	LHR	San Francisco	SFO
	Manchester	MAN	San Juan	SJU
Uruguay	Montevideo	MVD	St. Louis	STL
Venezuela	Caracas	CCS	Tulsa	TUL

\* Inbound service only.

QEP Accreditation does not imply any specific lift or flight availability.

**Service also available to:** ANU, SXM, AUA, BGI, BDA, BZE, CLO, MDE, UIO, GND, SAP, PAP, KIN, MGJ, GCM, UVF, PTY, SAL, POS, BNA, BWI, CLT, FLL, IAD, MCI, PIT, RDU, SAT, SMF, TUS, MAR, STT

The QEP training and quality program was developed at the request of shippers of healthcare products, and in response to industry guidance to acknowledge those service providers that are capable of properly managing shipments using the Envirotainer container. QEP accreditation is significant in that it demonstrates that a service provider meets their obligations as defined in current Good Distribution Practices guidance documents such as the Parenteral Drug Association (PDA) Technical Report #39: Maintaining the Quality of Temperature-Sensitive Medicinal Products through the Transportation Environment and IATA's Perishable Cargo Manual version 7, Chapter 17 which outlines Air Transport Logistics for Temperature-Sensitive Healthcare Products.



In addition to requirements to receive the accreditation from Envirotainer, the 60 cities with QEP accreditation are also capable of handling Envirotainers of all sizes.

Envirotainer provides the following different container types for use by American Airlines Cargo customers: the RAP, RKN and CLD container. Envirotainer's QEP accreditation further enhances AA Cargo's ExpediteTC service—developed for highly-reliable temperature-controlled transit on the carrier's worldwide network.

## **Certified Training of Personnel Worldwide Enhances Service Reliability and Accessibility**

The strength of AA Cargo's QEP accreditation is bolstered by the extensive hands-on training of more than 2,400 cargo team members globally. Customers are assured that QEP Certified personnel have a thorough understanding of all aspects of Envirotainer control, operation, maintenance and troubleshooting.

This includes the complete operation of the control panel all the way to the handling and changing of dry ice, cooling fans and container batteries. Achieving QEP status in multiple key locations and cities worldwide demonstrates AA Cargo's commitment to providing the highest standard of service and shipment reliability to its temperature-sensitive cargo customers.

## Summary

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AA Cargo has implemented a multi-layered, high-visibility system that combines state-of-the-art Envirotainer containers with accredited, highly-trained cargo personnel in major cities worldwide. All are designed to provide shipper confidence in the end-to-end shipping process for pharmaceutical products. A testament to the success of this multi-layered, high-visibility approach is that customers who started with the air carrier's pilot program have continued to use AA Cargo for their temperature-controlled shipments.

**Sources:** Article in Contract Pharma, A Matter of Degrees, July/August 2007 | Colography's Group U.S. Expedited Cargo Market Projections | IATA website | Envirotainer website

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For more information about QEP Envirotainer, ExpediteTC, and a complete list of locations served visit [www.AACargo.com](http://www.AACargo.com)

**American Airlines Cargo**<sup>SM</sup>

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