Optimising Airfreight

15TH ANNUAL COOL CHAIN
TEMPERATURE CONTROLLED LOGISTICS EUROPE

ColdChainIQ
Temperature Control Logistics & Quality Network

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Airfreight as a service attracts a high price. But for products that warrant the costs of being transported via airfreight, this mode of transport is quick, supplies a high quality of service and can provide much needed compliance assistance.

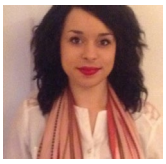
Life sciences products with a steady demand are better suited to be transported by ocean. However, David Bang, Global Head of DHL Temperature Management Solutions mentions that it is in line with the swift supply of new products where airfreight comes into its own.

"New products are constantly being introduced to new markets, which requires speed and flexibility based on smaller batch moves. The need for speed to the market and being able to accommodate fluctuating market demands will continue to rise no matter what."

He continued: "Speaking of the second advantage "regulatory compliance", over the last few years, the airfreight industry as a whole has stepped up to the plate to relieve some of the recent regulatory pressure that the life sciences & healthcare industry is facing, for example the EU GDP guidelines." In line with this focus on healthcare product handling on the rise, some freight forwarders have been aiming to obtain accreditations in this area from health authorities.

Products that are more temperature and time sensitive like biologics and biotechnologies are often more suited to airfreight rather than sea.

With this in mind, **Cold Chain IQ** has created this guide of elements to consider when optimising the use of airfreight within temperature controlled logistics.



Best Wishes | Chanice Henry - Cold Chain IQ Editor

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Not All Services Will Be Suitable

Mark Edwards, Modalis notes that pharmaceutical services from airlines will vary from basic to comprehensive. "Basic might be asking the manufacturer to arrange their own protection with the airline merely monitoring the shipment whilst comprehensive might include active temperature control on the aircraft and the provision of multi-temperature ground handling warehousing." When determining which is the apt option for you, a thorough grasp on your product's needs under GDP is vital.

Mark adds: "You could then opt to temperature control across the whole route or perform a risk assessment and arrange transport on that basis. "Both options have their advantages and disadvantages. Full temperature control can add significantly to costs whilst a risk-based approach can lead to temperature excursions which tend to impact financially, operationally and reputationally."

Monitor All Shipments on Route

Mark recalled a recent situation he encountered which emphasized the importance of monitoring all transits on route.

"At a recent meeting with a pharma manufacturer, they stated that they did not experience any excursions during transport thus they employed no special precautions. Given the route their products were taking, this was a surprising statement. However, when they confirmed that they did not use temperature monitors, it soon became apparent why they had "no issues". The moral here is that all shipments should be monitored en route, whether that is by monitors you supply or using loggers built in to vehicles, aircraft etc is up to you."

Monitors supplied by the pharma or biotech firm on average are the easiest to manage. They enable swift and accurate decisions to be made on the back of their end to end data.

Airfreight Temperature Control Methods

Active shipping systems:

Extremely reliable but usually sits at the expensive end of the spectrum. Deployed in high value/ critical situations where a temperature excursion cannot be countenanced. The system provider should offer full support here.

Passive shipping systems:

Works very well when sufficiently set up and lane characteristics are fully understood. Requires no intervention and can be booked as regular airfreight.

Reliance on airline's own control systems

Mark reminds: "Airlines differ widely in what their "pharma service" offers so you should only go down this line if you fully understand what the airline is offering and where there may be gaps in their coverage; typically these gaps would be at the airline handling and ramp stages ie at the airport."

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Use Data to Qualify Your Providers

Data generated by loggers can be utilized to temperature map, locate risk hotspots and play a key part in route or transport provider qualification.

"The use of loggers may highlight issues which you need to address [and] also an opportunity to qualify your providers and prove that they are doing a good job for you, thus confirming the validity of your risk assessments." Mark Edwards

Employ Complete Transparency Along The Supply Chain

The regulatory environment that surrounds the temperature controlled logistics industry is complex and ever evolving.

Governing guidelines exist to define the correct conduct for the transportation, documentation and security of pharmaceuticals, with varying country specific requirements. As a result, this forces a substantial level of communication between stakeholders in the chain from origin to destination to ensure swift and clean execution.

In line with the varying country specific requirements Tom Grubb, Manager, Cold Chain Strategy of American Airlines Cargo pinpoints:

"Canada, for example, has strict guidelines for pharmaceutical imports, as does Ireland, Brazil and numerous other countries. All of these regulations must be satisfied on the journey from pharmaceutical manufacturer to patient."

He adds: "Collectively, this is creating a rapid increase in the amount and type of regulatory oversight. While all these regulations are geared towards maintaining product integrity and patient safety, they also make moving temperature-sensitive cargo a complex, nuanced endeavour."

"Making the challenge more difficult still, regulations and requirements can conflict with one another and between stakeholders. Some stakeholders might even have different priorities and divergent understanding of what the regulations mean for fast, efficient cold chain transport. Addressing the differences between regulations and ensuring all stakeholders adhere to rules, while also achieving the speed and efficiency critical to the international pharmaceutical cold chain, demands collaboration."

"Pharmaceutical manufacturers, freight forwarders, air carriers and other stakeholders must have detailed conversations and group planning before a temperature-sensitive shipment

enters the cold chain. This means anticipating regulatory hurdles, agreeing on standards for documentation, understanding transfer times between flights and transportation modes, and adhering to all applicable rules – this while also delivering life-saving pharmaceuticals on time."

Avoid detriment from having multiple links in your air shipment

Tom Grubb notes: "On its journey, temperature-sensitive pharmaceuticals can cross different climate zones, encounter a range of threats to viability, and change hands between several forwarders, handlers, and even airlines. These and other conditions present potential threats to temperature-sensitive pharmaceuticals, and cold chain logistics partners must adhere to the myriad regulations designed to mitigate threats in transit."

An air shipment will feature a large amount of companies assisting with getting your product from end-to-end.

Mark notes that up to 27 companies may be involved, he continues: "This might seem excessive but think about it for a moment: you; the freight forwarder; the airline; the export Customs broker; the airline handling agent; the transport company which collects it and delivers to the airline; the ground handling company; Customs; regulatory agencies; etc – it soon adds up."

Nigel Wing, Global Head Life Sciences & Healthcare, DHL Global Forwarding, reminds: "At any point in the cold chain where product is passed to / handed over to another party, the risk increases. Reducing links and the handling involved in the chain is critical when assessing risk or likelihood of mistakes."

Mark suggests the adoption of of passive systems: due to their extra layer of protection, ability to work up to five days without intervention, although they do require careful preparation measures.

Clear delineation and articulation both internally and externally of your service requirements can manage these considerations. Remember to analyse your supply chain with an end to end perspective rather than limited INCO terms.

Conflicts of Interest

Some firms may choose to request temperature to be maintained between certain parameters via a declaration on the Airwaybill. Mark notes: " …but what if the majority of the cargo needs to be kept at a different temperature, or if the pilot uses degrees F instead of C or if, as is most common, your instruction is simply completely ignored?"

With this in mind, air freight volumes saw a rise at the start of this year. The International Air Transport Association (IATA) which represents 83% of total air traffic, charted a year on year increase at the start of 2015 in air freight volumes, which later dipped slightly in May. The trade association expects a sharp rise at the end of this year.

On the matter of conflicts of interest between freight orders on an airplane, Greg Giarratana National Airfreight and Branch Manger,

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Mainfreight International notes there are many things to be determined:"You arrive at the airport as cargo much earlier than the passenger does and you are handled and mixed in with other commodities. There could be conflicts of interest, of course, in regard to temperature zones. So there are a lot of things that need to be considered as an international forwarder [when determining how] to position yourself as a piece of cargo and how would you like to be treated."

Getting prepared for being on the ramp

A problematic stage often encountered by pharmaceutical firms occurs after flight when cargo is transferred from the aircraft to the airline warehouse.

In preparation for this stage, some of the promised offerings from airports include cooled transfer trucks, reflective blankets and temperature controlled warehouses en route. However, Mark notes that he has encountered issues with these on one occasion or another:"…the worst being product left in a non-temperature controlled warehouse for over 36 hours despite being booked, and paid for on a temperature controlled service."

One solution for this situation is the use of active cooling device, - efficient but can be expensive and can need intervention – re-icing, mains plug power, fresh batteries, etc…

Passive systems can be a good option here, but bear in mind that due to the added bulk this option is likely to increase the weight being shipped and therefore the cost needed.

Closing Remarks

Airfreight is an exceptional tool when applied successfully. While optimising the use of airfreight it is paramount to pay attention to addressing potential pitfalls that may be encountered. This way your return on investment will be more safeguarded.

Want to learn more about optimizing your airfreight strategy?

The Temperature Controlled Logistics Europe Conference will analyse the process of optimising air freight in-depth and is set to give attendees key takeaways on the matter. Turnover for more...

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Featured Air Freight Sessions at Temperature Controlled Logistics Europe include:

A GSK Case Study:

Jeroen Janssens Sr Specialist Manufacturing Expertise Cold Chain, GSK Biologicals looks at **Cost Effective Optimization of Packaging for Air Freight**. Jeroen analyses the process to identify gaps, evaluated innovative solutions and talks though the decision making process for cost effective optimization.

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Join IATA for everything you need to know to ensure compliance. Andrea Gruber leads an intensive workgroup focusing on **Regulations for Temperature Sensitive Air Freight Shipments & Security Initiatives.** Identify the risks and the gaps along the cold chain, how to improve the handling of pharmaceutical cargo and practical solutions to ensure you are compliant with regulations globally.

Open Discussion Groups:

Join the conversation on **Maximizing Quality and Driving ROI with Airlines** - streamlining your temperature management to maintain product integrity

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• **Brand New Innovation Forum** – A senior level, 100% discussion led stream focused on the next generation supply chain. Where is temperature logistics heading? How will technologies such as 3D printing effect the temperature controlled logistics market?

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