

Lucrative awkward loads



Heavy and awkward airfreight may be air cargo's ugly duckling but it is a large and growing global business serving complex supply chains, writes **Roger Hailey**

While pharmaceutical and e-commerce supply chains grab all the airfreight limelight, the outside and project cargo sector is enjoying healthy volumes, from heavyweight aero-engine shipments to oil industry blowout preventers.

Robert van de Weg, vice-president, sales and marketing, with Russia's Volga-Dnepr Group (VDG), reports that the off-size market is "definitely booming", due to the many complex projects developing in different parts of the world.

VDG's AirBridgeCargo (ABC) division, operating Boeing 747 freighters, has seen offsize and heavy shipment volumes for its specialist (abcXL) product rise almost 40% for the first nine months of 2018.

"We have achieved significant volume upsurge for off-size and super heavy cargoes from North America (50%), Europe (40%), and North East Asia (over 35%).

"This is mostly supported by thorough development of our abcXL product, where we have reinforced our ABC global team, adopted the best practices from Volga-Dnepr Airlines, with its 28 years of

experience, introduced the cutting-edge technologies and software to speed up and improve the process of loading, and many other steps which had been on the radar of our business in the sector of offsize and heavy shipments."

Jumbo product

European all-freighter operator Cargolux offers its CV Jumbo product for urgent ad hoc cargo with short deadlines, and CV Power, primarily for automotive and aero-engines supply chains, although the latter does include aircraft on ground (AOG) solutions.

Eric Reisch, products manager for Cargolux, says: "Year to date (end of October) we have flown some 1,200 aircraft engines. Some may be directly AOG related, while others may go to a storage facility, ready for dispatch. It depends on the customers and their supply chains."

Part of the reason for the increase is the burgeoning fleet of passenger aircraft: "It is a growing business, especially all the large frame engine types which require maindeck capacity."

Paul Hoffmann, Cargolux director of ground engineering, adds: "One of

the things we are seeing is that aircraft engines have become bigger, which means you need higher capacity of the loading equipment, for example with the [Rolls Royce] Trent 1,000 engines and Trent XWB engines, it becomes more complicated in terms of lashing and securing of the cargo."

The size of the larger engines means that there is a maximum of two per flight, while there can be a greater number on board with the smaller Leading Edge Aviation Propulsion (LEAP) engines.

Hanson Masih, managing director of aero-engine logistics specialist forwarder HSM Global confirms that the aerospace vertical "continues to perform well".

He continues: "We have emerged from an unprecedented summer airline flying schedule, this has been succeeded by strong demand for the airlines' winter maintenance programmes. The demise of several airlines recently, including Primera, Cobalt and Air Berlin, has impacted our airline clients in a displacement of traffic, which has been absorbed readily."

"The airline business is tough and we have noted that only the strong,

well-organised airlines continue to thrive. The primary and secondary airplane manufacturers forecast strong passenger and cargo growth and this bodes well."

On the prospects for new product types in the outside market, Masih observes: "From a technological perspective, the airline industry is evolving at a fast pace, underpinned with a focus on producing leaner, greener aircraft in line with social/environmental responsibilities and profitability.

"We are seeing younger aircraft being replaced within the primary markets and this has created greater demand in South America and Africa. As airlines replace their fleets, these aftermarket regions have a requirement for the kinds of out-of-gauge cargoes that we handle. The opportunities continue to grow in this sector."

Market overview

Gary Dale Cearley, managing director of Advanced International Networks and executive director of XLProjects, provides an overview of how the main outside and project cargo sectors are performing: "Since Donald Trump has been in office we

[the US] haven't been in any major military altercations overseas, so there is less charter work being done by the US military.

"Oil and gas are picking up, especially in Southeast Asia and Africa. The African perishables market, especially flowers to Europe, still seems to be doing well from what I am hearing through my agents."

Asked about the potential downside for the outsize and project markets of a trade dispute between the US and China, Cearley believes that, overall, it will not have a great effect on outsized shipments from China to the US. He adds: "Inbound, there might be some issues with perishables shipments as China gets a fair amount of this from the US and the hi-tech business will become a kind of triangle trade between the US, China and Association of Southeast Asian Nations, like the furniture trade did in the early 2000s."

Cargolux, like most airfreight operators, is waiting to see how trade tensions between the US and China develop in real terms.

Says Reisch of the future prospects: "An opportunity market will be based on the political developments, so on one side it can be opportunities and on the other you have challenges to overcome. Currently we have no reason to believe that 2019 will be less interesting than 2018 or 2017, so we are looking ahead positively."

"Obviously, the CV Jumbo market will remain a bit more spontaneous whereas for CV Power we are currently looking at closing deals with key customers to keep the supply chain active during the period of lower activity during."

Trade tensions

For Masih of HSM Global, the fallout from US/China trade tensions "has yet to be truly recognised, especially in light of tariffs that will be imposed on \$200bn of annual shipments to the US in January".

He continues: "The Bank of England and members of the G7 fear that the trade war could lead to a general slowdown in global growth. The policy has already been impacted by leading US 'power brands' transferring their manufacturing to China in a bid to eliminate local taxes and duties."

"From an aerospace perspective,



Loading a GE GE9X aero engine on a Volga-Dnepr An-124 freighter

the OEMs at this time dominate a captive market as out-of-gauge items — engines, flight surfaces, landing gears — through necessity will have to be shipped from the US to China and vice versa.

"Despite this, it is highly likely that forward-thinking groups will adopt hedge strategies through positioning high-ticket values into the region."

AOG logistics, flying replacement aero engines at short notice, are challenging but rewarding in every sense for freighter operators.

Van de Weg of VDG explains: "This year we introduced our dedicated AOG service, which is the product of Volga-Dnepr Group and covers the services of both scheduled and charter airlines (Volga-Dnepr, ABC and Atran), as well as its strategic partner, CargoLogicAir, and Volga-Dnepr's MRO division, Volga-Dnepr Technics.

"Each charter request follows the standard operating procedures established by Volga-Dnepr's AOG service, which was launched to manage the delivery of urgent spare parts to aircraft stranded around the world, and which has been working effectively to benefit customers in the

aviation industry."

Continues van de Weg: "Once a request is received, all related Volga-Dnepr departments are placed on alert, ready to activate the necessary fast co-ordination and approval of all the flight preparation stages, including loadability confirmation, airport slots, and gaining traffic rights approvals."

"Being always determined to cater to the needs of its freight forwarder and end customers in the aerospace and aviation sectors, Volga-Dnepr Airlines and AirBridgeCargo have completed around 800 deliveries of aerospace equipment in the first nine months of 2018, including satellites, aircraft engines, and spare parts, and also operated more than 15 charters in response to AOG situations."

And while aero engines are a growing business for most freighter operators, the emergency requirements of the oil and energy sector are equally demanding.

Cargolux had one very dense shipment, a 25-tonne single piece blowout preventer, which had to fly from Houston to Singapore as quickly as possible.

Says Hoffman: "We received the

request on the Tuesday. The shipment was booked on the same day and on Thursday it was flying. So we had a really short time to organise everything, from loading to offloading and even the transit, getting all the equipment in place."

The short time factor was the challenging part of this shipment but Cargolux says that the speed of response was helped by internal restructuring that quickened the acceptance process, allowing the carrier to confirm the booking on the same day it got the request.

Training programme

The restructuring took the form of a training programme to connect the different sections, including operations personnel, but also the booking staff so essential information was shared. Says Reisch: "We ensured that people know what to ask the customer, which makes the validation aspect much easier and quicker in responding."

Cargolux has also been looking at innovative solutions for securing loads and optimising the onboard equipment for longer pieces.

→ Continues on page 20

AIA cargo

THE **CARGO GSSA**
YOU CAN TRUST



+44 (0) 203 432 7810



sales@aiacargo.com



www.aiacargo.com



→ Continued from page 19

Says Hoffman: “We invested in new software to find good lashing and loading solutions for outsized shipments. We try constantly to develop new equipment with our suppliers, and one initiative was to develop lightweight stowing materials, for example a lightweight spreader to spread the weight of a heavy and dense piece of cargo over a larger bearing area.”

Working with Boeing and an equipment supplier, Cargolux has gained certification for an innovative pallet coupler.

The coupler is a special device that enables two 10 ft pallets to be joined securely, without any movement when bearing a shipment that is long rather than particularly dense and heavy.

It is an initiative to save weight on equipment, knowing that heavy duty 20 ft pallets weigh two or three times as much as normal airfreight pallets (PMCs).

The reduction in weight enables the airline to optimise and capitalise on the aircraft payload. A PMC weighs around 130 kg, while a 20 ft pallet is double the size but weighs 500 kg. Connecting two 10 ft pallets, at 260 kg, is a significant saving but an added benefit is that the industry standard PMC means less hassle around the logistics of return loads.

Long and short of it

This is a solution for longer pieces, whereas a heavy shipment will still require a specialist 20 ft pallet.

There is a surprising variety in the freighter aircraft focused on the outsized and project cargo sector, for example the Boeing 747-8F has an extended fuselage which is eight



‘To keep on growing the off-size products we will develop our existing markets for the destinations showing the highest growth rates’

Robert van de Weg, Volga-Dnepr Group

metres longer than that of a Boeing 747-400F.

Says van de Weg of Volga-Dnepr: “This has significantly enlarged our loading capabilities, especially for super-long shipments.

“Since operating the B747-8F we have been able to deliver, for example, up to 50 small cars (40 on a B747-400F), 20 buses (18 on a B747-400F), as well as the [gas-turbine] Trent 60, which could be lashed and transported only on-board a Il-76 or B747-8F.

“To keep on growing the off-size products we will develop our existing markets for the destinations showing the highest growth rates.

“At the same time, we are ‘educating’ our customers and explaining that air cargo delivery covers not only delivery costs, but embraces other things, like carrying and opportunity, safety measure associated costs.

“The understanding of what hides behind charter costs is essential for customers and our aim is to guarantee that they have all the information needed.”

Speaking about charter operations on board Volga-Dnepr’s An-124 and Il-76 freighters, van de Weg says that these flights are organised “with complex project shipments on board

and they are open to any market opportunities covering various destinations”.

He continues: “We expect continuous, stable demand from traditional industries, which require transportation of oversized and super heavy project shipments such as oil and gas, aerospace, energy, and heavy engineering.

“Some projects are on the positive trajectory of development, such as windpower, steel and mining sectors, as well as oil and gas related. This will certainly facilitate more requests in the coming year.

“In particular we see a major surge in aerospace — engines both new and destined for overhaul.”

So, what does the shipper or forwarder have to take into account or prepare in advance, to ease the process in sending an outsized shipment?

Says Hoffman of Cargolux: “Every request is unique and the challenges are case by case. Sometimes it is already a challenge to get it to the airport, to find a trucking solution, and sometimes the challenge is to find a solution in the aircraft.

“Sometimes it depends on the destination, where there are lots of

airports with different local capabilities, and we then have to find a solution based on those capabilities.”

Reisch adds that it is important at the earliest stage to know the footprint of the cargo, the weight, how it is packaged and how it can be secured within the aircraft using cargo straps.

“Ideally we like to see the pieces unpacked so that we can do our lashing directly on the shipment and not on a crate where we don’t know whether or not it is correctly secured inside.”

Cearley says planning for outsized cargo is much more intense than standard airfreight: “The aircraft’s load planner will need the packing list well in advance and this will have to be both as concise and as descriptive as possible with the correct drawings, measurements and dimensions.

“If the cargo has flown before it is good to have stowage and lashing details from the last journey. Correct technical drawings, 3D where possible, are a must and this should include correct depictions of the base where the cargo will sit.

“You will have to ask yourself whether or not the cargo can be driven into the cargo hold, is it self propelled and what kind of loading equipment will be needed to move it into place.”

Hazardous materials

Another important question that needs to be asked is whether the cargo contains dangerous goods or hazardous materials. Many times it will, even if you don’t realise it. A further point to consider is whether or not the cargo needs climate control.

Says Cearley: “If you are not sure about any of this then I would recommend speaking with both the manufacturer and the air charterer or owner of the aircraft, depending on who you are directly dealing with.

“Also, if the flight is a charter, you will need to be clear on airport permits and other documentation, and who will be responsible for arranging this.

“If there is something that you don’t understand about any of this process, I highly recommend that you talk with the experts well before you run on your own.”



Cargolux aero engine loading