



Elbe Flugzeugwerke (EFW)

The Dresden cargo jet workshop

Elbe Flugzeugwerke (EFW) in Dresden is a company with a long tradition of aircraft construction. Since 1996 it has specialised in converting wide-body Airbus jets into freighters for customers around the world.

Text and photos: Alexis von Croy



One of the main tasks when converting an A300 or an A310 into a freighter (pictured is an A310-300) is the installation of the main-deck cargo door. The required reinforcement to the main-deck floor structure can be seen in the upper fuselage section



If the customer wishes, EFW will also completely overhaul and update the avionics system. Shown here is the cockpit of an A310-300

A300/A310 Ten steps to the perfect freighter

- 1. Insertion of window plugs
- 2. Deactivation/removal of pax doors
- 3. Installation of main deck cargo door
- 4. Reinforcement of main deck floor structure
- 5. Maximisation of fuselage interior cross-section
- 6. Installation of main deck cargo loading system
- 7. Installation of safety barrier net and smoke curtain
- 8. Installation of smoke detection system
- 9. Finishing of courier area and installation of seats
- 10. Adaptation of aircraft systems

If the customer so desires, EFW will also perform a complete overhaul or maintenance of the entire aircraft.



Almost completed: This A310-300 will soon be carrying freight for Federal Express. The new ground coat reveals where the riveted structure of the aircraft is in need of reinforcement. To the right of the stairway, the newly installed loading door on the main deck

Not long ago, this 'Air Paradise' Airbus was flying tourists to Bali



Vertical struts are installed to reinforce the upper deck



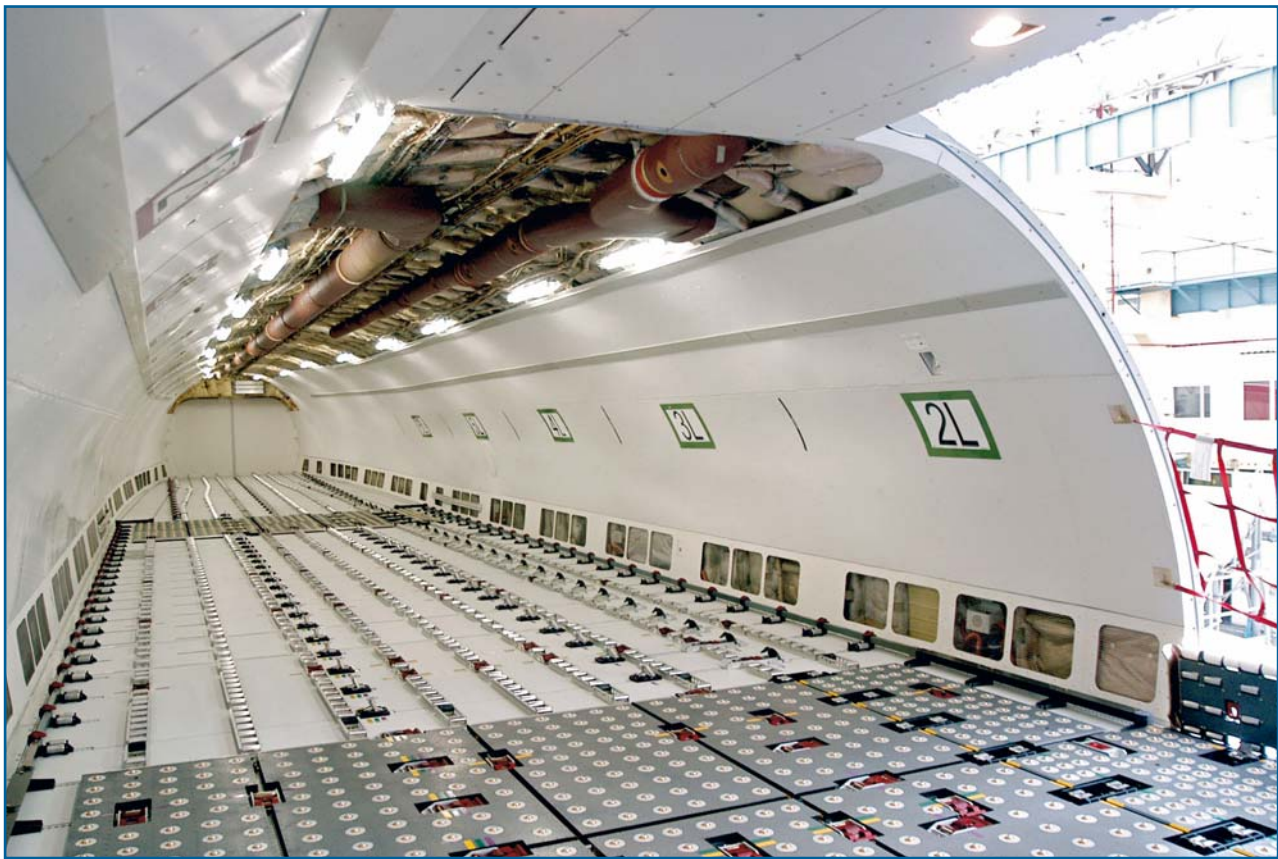
Saxony's capital is not only a world-famous cultural metropolis but also a city with a long tradition of high technology. It was in Dresden that the first 35mm single-lens reflex camera – the 'Kine Exakta' – was developed and produced from 1936 onwards. And it was here, in the days of the German Democratic Republic, that Germany's first passenger jet, the Baade 152, was built.

The brief career of the Baade 152 was far from illustrious, but today big jets are emerging from EFW's huge hangars at Dresden airport once again. None of them are new – these are Airbus A300s and A310s converted into freighters. All have reached the end of a career as the pride of well-known airlines all over the world and have carried passengers for many

one thing, the crews of cargo planes are human beings too, and for another – quite apart from the unlikely event of a crash! – delayed air freight consignments do nothing to enhance the freight operator's image.

The pensioned-off jumbo jets are often in excellent technical shape and can be had for relatively low prices. Freight carriers such as FedEx, UPS or DHL, to name only the majors, are always on the lookout for genuine 'bargains': aircraft that have been in service with the major flag-carriers, maintained to high standards and equipped with modern avionics. Many an A300 or A310 changes hands for less than 15 million dollars, or only about a tenth of the price of a new freighter of equivalent utility value. After their conversion, which normally costs some-

125 conversions in ten years



The freight compartment of a FedEx cargo jet shortly before completion. All the windows are plugged and the cockpit and the small passenger area are secured by a 'crash net' (not shown)

Facts Elbe Flugzeugwerke

Founded:	1991
Turnover in 2005:	€183.1 million
Workforce:	1030
Conversions per year:	20
Sandwich components produced per year:	200,000
Factory space:	65,000 m ²

millions of kilometres. They have been supplanted by other aircraft, including prestigious new jets such as the A330 and A340. Airline passengers want to travel in the latest models, either because brand-new aircraft usually offer greater comfort or because they seem safer to the layman.

Cargo containers are not so demanding. As pilots like to joke, "Cargo doesn't get sick, cargo never complains". Cargo doesn't care how old the aircraft is either – though there is no justification for the assumption that freighters are any less safe than others. For

thing between seven and nine million euros, the aircraft are perfect air freighters in the 30/60-metric-ton class.

Conversion of the jets takes place in accordance with a supplemental type certificate (STC), exclusively using original parts supplied by Airbus. In this way, EFW is able to guarantee that the modified aircraft are of the same high technical standard as new, original cargo jets coming straight off the Airbus production lines.

Within the EADS Group, EFW is the centre of excellence for the conversion of Airbus

passenger airliners into freighters. But EFW does much more than that. If the customer wishes, the aircraft are completely overhauled or maintained, engines are sent to be overhauled, and avionics systems are updated – for instance by installing glass cockpits.

Alongside its Airbus freighter conversion activities, EFW has another line of business – its second supporting pillar, so to speak: it manufactures and supplies fibre-reinforced panels made of sandwich material for the entire Airbus family of aircraft. Over a million such furnishing components have been delivered to the final assembly lines in Hamburg and Toulouse since 1993, when the production of these components was moved to Dresden from the Hamburg Airbus plant. The cargo compartment panelling and the floor panels for the A380 were developed at EFW in close co-operation with Airbus – another activity that has proved a true success story for the capital of Saxony.

Freighter conversions, too, were originally handled by the Airbus site in Hamburg, and this operation was not moved to Dresden until 1996. Prior to this, EFW had been engaged mainly in maintenance and repair of Eastern bloc military aircraft, especially jets. Then, after the reunification of Germany, EFW built structural components for Fokker '70' and '100' aircraft, and parts for the Bréguet-Atlantique reconnaissance aircraft and the Airbus A300-600ST 'Beluga'.

By the end of March 2006, EADS had converted 125 Airbus machines into cargo jets that are flown by 26 customers worldwide. The biggest customer is the US air freight carrier FedEx, based at Memphis, Tennessee, which now operates more than 60 Airbus freighters.

The know-how and experience of EFW is unrivalled when it comes to converting A300s and A310s into transporters. And thanks to their large fuselage cross-section – the interior width of the fuselage is nearly 222 inches (5.70 metres) – the European aircraft manufacturer's classic wide-body jets are ideally suited to their new duties in worldwide cargo traffic.

In a few years' time, when the first used A320s appear on the market at reasonable prices, a new freighter programme could be launched at EFW – the company has already embarked on discussions with Airbus concerning this potential development in EFW's career.



More information about Elbe Flugzeugwerke (EFW) is available on the company web site: www.efw.eads.net