

Aviation for Tomorrow.

 **ELAN**
EDAG Group

 **MÜHLENBERG**
EDAG Group

ELAN GmbH

Cabin Interior and Systems Engineering

The ELAN **Cabin Interior** today provides engineering services for new development and customization. We cover all activities from concepts and early definitions, over manufacturing support and liaison engineering to the final installation for the complete aircraft cabin.

The ELAN **Electrical Engineering** provides services from the definition of a electrical system over the manufacturing support and liaison engineering to the final installation & more.

The main activities of ELAN **Cabin Conversion** are the planning and design of partial or complete refurbishments of the aircraft cabin including passenger & cargo aircrafts. The complete scope of Cabin Interior and electrical engineering can be provided from one source for upgrade services & more.

Structure & System Integration

The ELAN **Structure** team for Primary Structure provides design engineering services including the wide range of metallic and composite design, manufacturing issues & more.

For **Stress Engineering** services the field of competencies comprises Primary Structure Metal & Composite (e.g. linear & non-linear FEA, certification reports, analytical methods), Fatigue & Damage Tolerance (e.g. justification and methods development), Method Development (e.g. for stress shell, stress frame, structural tests, non-linear FE, repair and crash) and Legacy Tool Support (e.g. ISSY & ISAMI maintenance and training).

The strong ELAN **System Integration** team focuses on Secondary Structure engineering including bracket concepts and design, validation of system interface points & more. Further on System design of mechanical systems and their associated supports.

Jigs & Tools

The main activities of the **Jigs & Tools** engineering team are design & stress, manufacturing management, commissioning & more. It covers all necessary tools for aerospace industry from operating facilities and plant equipment till testing, measuring and manufacturing tools.

Off-Shore Capabilities

EDAG India is the chosen Off-Shore resource with aviation experience of more than five years.

History

Making ideas fly – that's what ELAN stands for. As a young, expanding company, ELAN combines the know-how and expertise of two companies which up to now operated independently in aircraft construction, wind energy and shipbuilding, generating constant growth and high levels of customer satisfaction, together with an excellent reputation in all areas.

As a joint venture of the independent companies EDAG Sigma and Lühmann, ELAN has been operating on the market since 2004. In early 2008 the two partners gave up their individual existences and merged to form ELAN. Their portfolios supplement each other in an ideal fashion: Lühmann has been developing cabin interiors for the aviation industry for more than 40 years, while EDAG Sigma looks back on more than ten years of experience in developing structural components for Airbus, on-board toilets for Dasell or VIP cabin interiors for Lufthansa Technik.

Mühlenberg – Excellent Work since 1955.

Mühlenberg Interiors GmbH & Co.KG

Mühlenberg Interiors GmbH & Co.KG is a certified company specialising in the design, production and maintenance of aircraft interiors for passenger, VIP and freighter aircraft - including certification of integration (Supplemental Type Certificate (STC)).

Our company was founded by Albert Mühlenberg in Hamburg in 1909 and is today for over 50 years one of the world's leading manufacturers of high quality and weight-optimized cabin interiors. At our location in Hamburg we design and manufacture with our 200 employees exclusive aircraft galleys, stowages and other similar lightweight aircraft components as plug & play solutions, from the initial idea via development and design through to the production process.

Thanks to the great depth of our production activities, our development engineers and production specialists are also in a position to implement individual customer requests in an optimized weight configuration – from simple stowage lockers through to the exclusive first class bar, with numerous design elements as for the Airbus A380.

For our costumers - airlines, aircraft manufactures, completion centres and railway manufacturers worldwide - we provide a high flexibility and customer orientation.

Products

- Galleys for Passenger Aircraft
- VIP and Corporate Jet Galleys and Cabin Interior
- Monuments
 - Partitions
 - Doghouses
 - Stowages
 - Bars
 - Video Control Centers (VCC)
 - Baby Bassinets
 - Freighter Galleys and Courier Modules
 - Social Areas
 - First Aid Areas
 - Self Service Bars
 - Cabin Workstations

Services

- Product Support
- Spare Parts
- Repair and Maintenance
- Testing
- Modification and Refurbishment

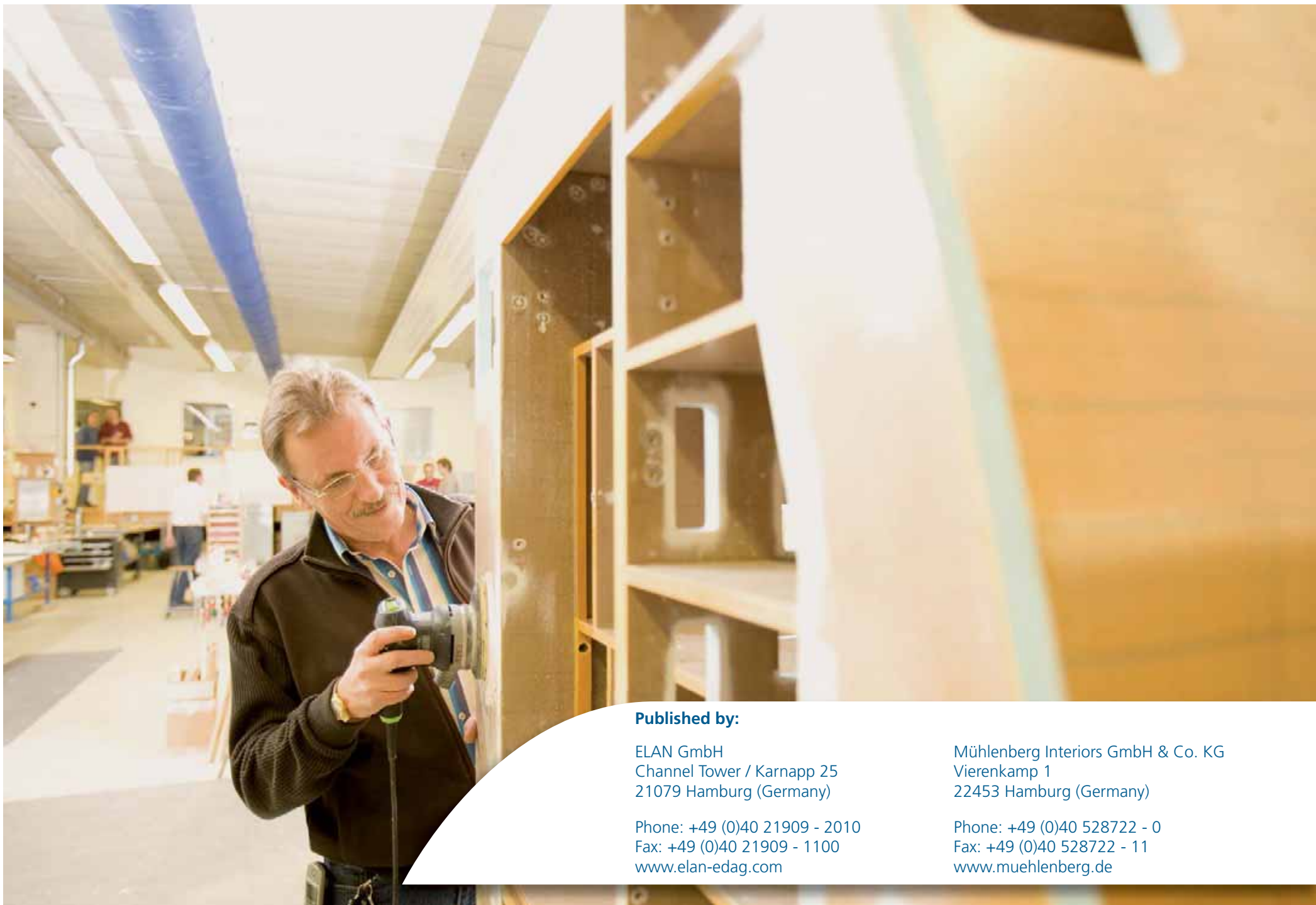
Certificates

- EN 9100:2003 (QSF-C)
- EASA - Part 21 J (JAR 21-J)
- EASA - Part 21 G (JAR 21-G)
- EASA - Part 145 (JAR 145)

History

When Albert Mühlenberg founded his factory in 1909, the aviation industry was still in its infancy. But the production of models for shipyards and foundries, which was the speciality of the young model maker, already demanded absolute quality and precision. Mühlenberg remained faithful to this claim on shifting the focus of his business activities to aircraft cabin interiors since 1955, following the relaunch of Lufthansa and the start of civil aviation.

Mühlenberg began to produce special furniture, aluminium modules and the forerunners of today's aircraft galleys, thus also playing a role in aviation history right from the start. Since 1972, the company has been a certified development, production and maintenance company for aircraft interiors in passenger, VIP and freighter aircraft; with its 190 employees, today it is one of the world's leading manufacturers of top quality cabin interiors.



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