



**FOAM ENGINEERS**  
INNOVATE ► DESIGN ► MANUFACTURE



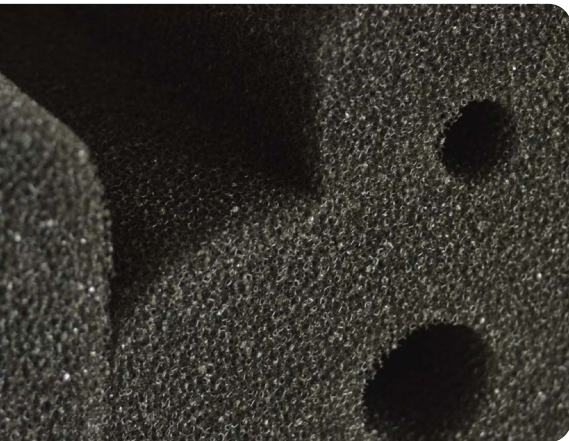
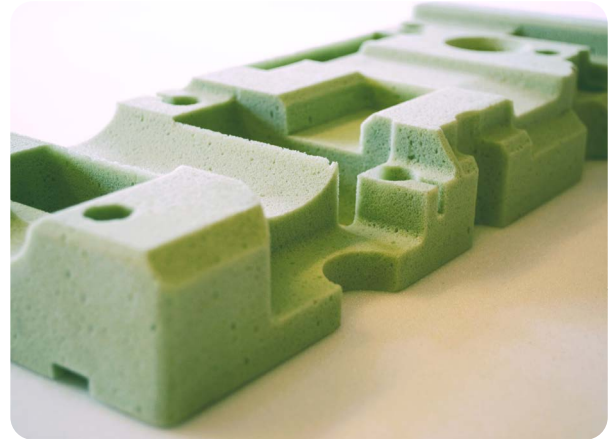
**AEROSPACE  
DEFENCE  
INNOVATION**

[www.foamengineers.co.uk](http://www.foamengineers.co.uk)



## Foam Engineers has a proven track record of understanding and adhering to aviation standards, our goal is to offer a perfect formula which aviation companies can easily work with.

Foam Engineers is a specialist business based in High Wycombe with extensive expertise in creating foam solutions for commercial airlines and defence vehicles. Highly regarded and rated within the top five percent of bespoke technical foam fabricators in the UK. Relied on for providing quality, technology, cost-effective products, with a wide range of capabilities and services that meet high standards based on award winning, in-house designs.



- **Technical Foam Fabricator**
- **Airbus Audit Approval Code**
- **Aerospace Foam Grades**
- **Approved Zotefoams Converter**
- **ISO 9001: 2015 adapted to meet AS 9100**
- **Turnkey Solutions**
- **Automated CNC Machining**
- **96 Years of Heritage**

Foam Engineers works closely with major manufacturers and companies operating in the civil and military airline and aerospace industry. We produce specialist foam products supplied into UK, European and American markets. We can offer a combination of high specification foam types, alongside complex manufacturing and shaping technologies, backed up by quality assurance systems which provide in depth analysis, monitoring and traceability. Please read on for further information on the range of materials we convert.



# Explosion Suppressant Foam (ESF)



**Explosion Suppressant Foam (ESF)** is an established critical product for applications in aerospace and defence. We provide a full range of safety foams, approved by U.S. Air Force, Navy, Army and foreign governments. Safety Foam can be machined and fabricated into any technical configuration to fit inside a complex rigid, flexible bladder or rigid fuel tank including many sensitive and protected applications. Reticulated Polyurethane foams for explosion suppression and surge/noise mitigation are unique materials for use in fuel tanks of aircraft and virtually any vehicle where the possibility of fuel tank explosion exists.

Foam Engineers has developed an advanced and protected way of 3D machining complex and technical shapes in open cell reticulated foam on our CNC machines creating an ultimate and unparalleled foam product for use in applications such as void filling and methods of carrying a resin which solidifies into a permanent structure. These products are typically found in aerospace applications using our military specification, conductive foam. Our knowledge and experience of CNC machining is the most advanced in the industry, this is proven time after time as we continually achieve high complex 3D profiles and geometry.

MITIGATES  
FUEL SPRAY

EFFECTIVELY  
BAFFLES FUEL

LOWEST  
LOGISTICS  
SUPPORT

COST  
EFFECTIVE

PREVENTS  
CATASTROPHIC  
EXPLOSIONS

MAINTENANCE  
FREE

EFFICACY

PASSIVE  
OPERATION

MAY BE  
FABRICATED  
INTO ANY  
SHAPE





# Technological Progress

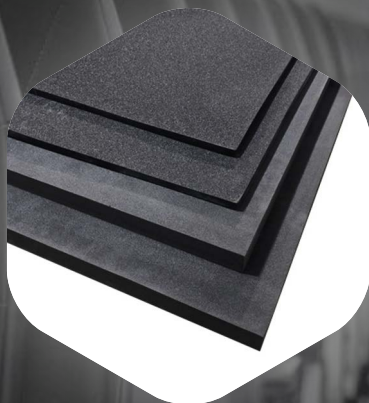
**Advancements in aerospace technology such as the development of advanced materials and manufacturing processes are driving innovation in the aerospace foam market.**

As aerospace foam suppliers, we can capitalise on these technological advancements by offering innovative solutions that address the evolving needs of the aerospace industry. We are fabricators of one of the most advanced aerospace foam materials on the market today which is typically used in aerospace applications.

**Closed-cell rigid foam** based on **Polymethacrylimide (PMI)** chemistry are high performance structural foams with outstanding properties making it ideal for aircraft components such as stringer structures in pressure bulkheads and in fuselage panels and main and tail rotor blades of helicopters. These foams can withstand curing temperatures of up to 180°C and pressures as high as 0.45 MPa. New designs in aerospace and aviation are increasingly replacing

conventional metal structures with innovative and lightweight, high-performance fibre composites. Performance foam core materials for sandwich-design composites can satisfy the needs of both exterior and interior applications. Foam Engineers is leading the way in highly technical 3D CNC machining of foam components and achieves consistent levels of accuracy and finish which keeps us producing quality parts meeting the expected high standards in aviation.

**AZOTE®** Aviation and Aerospace foams offer a unique combination of benefits and includes the lightest OEM approved FR grade aviation foam, conductive and static dissipative grades compatible with sensitive electronic components. Characteristics offer lightweight, low odour, crosslinked, closed cell with consistent cell size.



**ZOTEK® F** is a high-performance closed cell, crosslinked fluoropolymer foam that provides outstanding flame, smoke and toxicity performance and is inherently flame retardant, making it the perfect lightweight choice for many applications in air and space craft interiors.

**ZOTEK® F**  
**Applications**

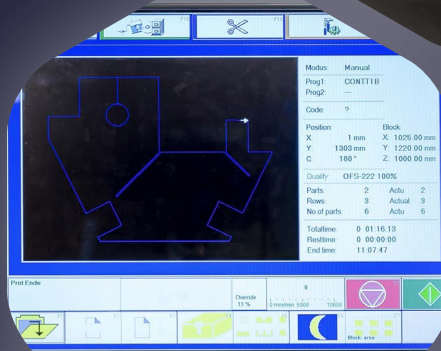
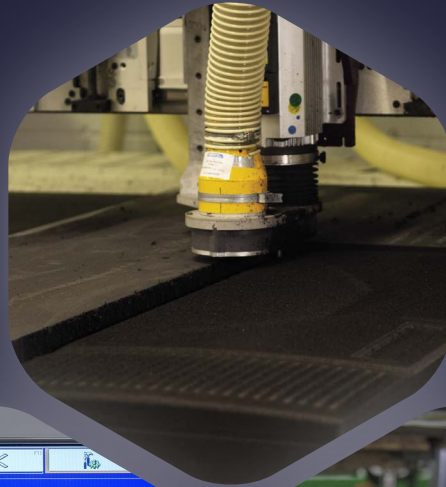
- Aircraft Interiors
- Aircraft Airframe
- Insulation
- Soft touch trims
- Aircraft carpet underlay





# Our Services

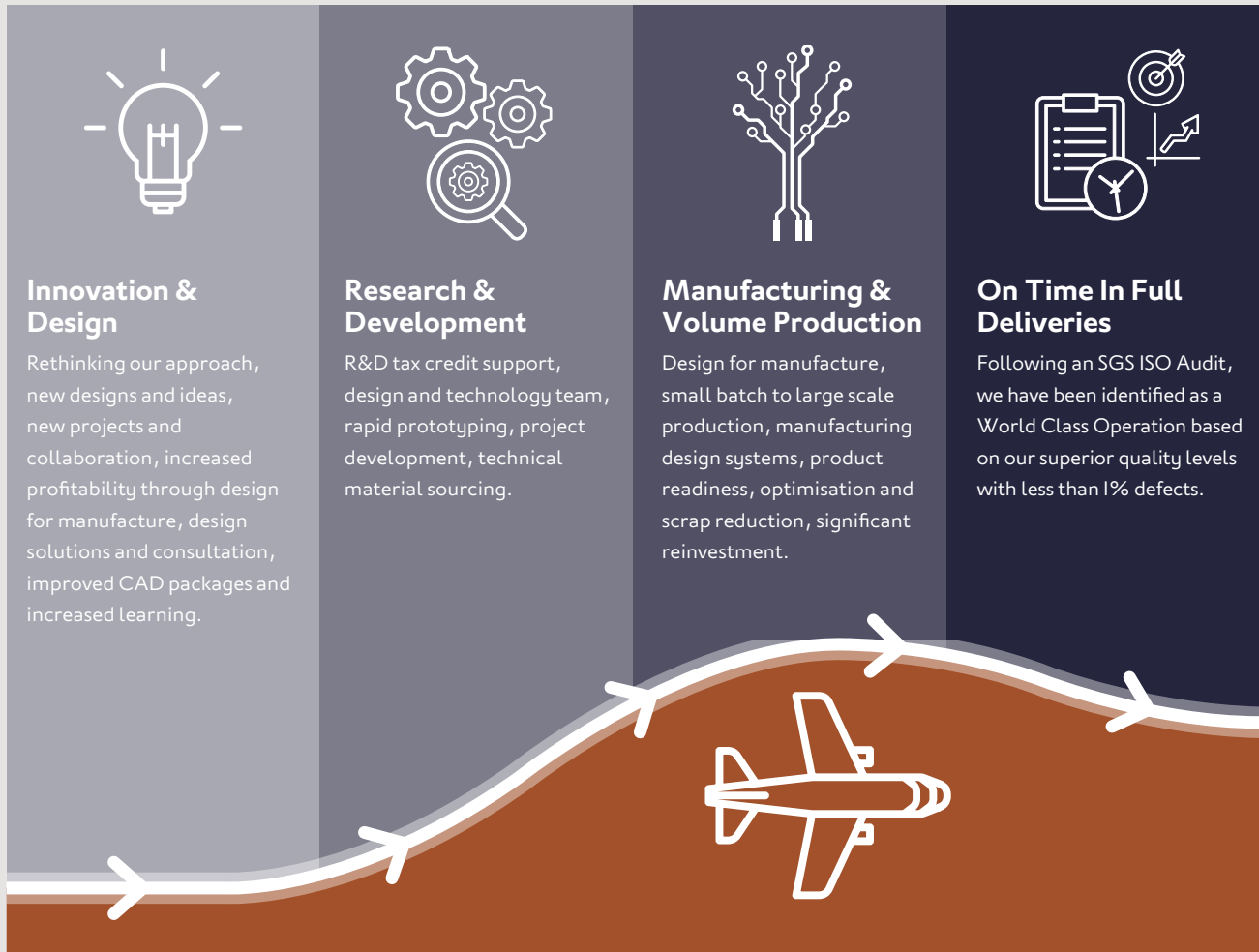
- CNC Machining
- Design and Prototyping
- CAD
- Thermo and Compression Moulding
- Material Consultation
- Design for Manufacture (DFM)
- Quality Control Procedures





# Innovate | Design | Manufacture

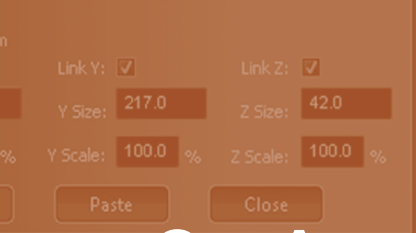
## Product design from concept to delivery



Foam Engineers is proud to have significant relationships, including:

- **Airbus**
- **Rolls Royce**
- **Martin Baker**
- **Continental**

**PRODUCTS OF  
UNCOMPROMISED  
QUALITY DELIVERED  
ON TIME AT A  
COMPETITIVE PRICE**



X: 1029.6482  
Y: 508.0402  
Z: 8.0000

# Our Approach to design

The key is for our design and technology team to understand customer requirements and specifications including material research and evaluation, this is achieved through our innovation centre. We create lasting relationships based on trust, service, transparency and an open exchange of experience and know-how.

## Materials

- Polyurethane
- Aerospace and Military Grade Explosion Suppressant Foams
- Zotek F & Plastazote
- Polymethacrylimide (PMI)
- Polyimide Foam
- Polyvinylidene Fluoride (PVDF)
- Performance Foam Core Materials
- Graphite Foams
- Flame Retardant Foams

## Products and Applications

- Void Filling
- Fuel Tanks
- Protection Cushioning
- Aircraft Interiors
- Impact Absorption
- Insulation
- Seals and Gaskets
- Safety Components
- Maintenance and Replacement Parts

## Quality Assurance



Continuously recognised with customer testimonials and Industry Awards, Foam Engineers performance including quality, on time deliveries, competitiveness and the ease of doing business with us.

This includes, rated excellent on Trustpilot, Parliamentary Review entry, winners of the Zotefoams Centenary award for most unique product, winners of the MX Manufacturing Award for Leadership and Strategy plus more.

## What We Do

- Quality checks on all parts
- Full adherence to technical specifications
- Ability to achieve aerospace tolerances
- Quality Management System (QMS) adapted to meet AS 9100
- Quality policy
- Airbus audit approval code
- Coordinate Measuring Machine (CMM) compliant parts
- Quality control documents completed with every order
- High tolerance and compliance
- Quality performance monitored
- Improvement Action Reports, 5 Whys and Fishbone



# Focusing on the Future

## Our Vision

Develop, create and provide innovative foam designs and solutions and be both effective and productive at manufacturing unique foam products in highly competitive market sectors. Add full credibility and uphold our highly regarded position within the top 5% of the few foam converters offering a purely technical and bespoke foam fabricating solution. In so doing, we will focus on technical excellence and precision engineering within the foam conversion sector, taking full advantage of global opportunities in new markets and allowing us to further expand as the market leader, in an existing technical market.

## Our Core Values

**Respect** – we have respect for others, go about our business honestly, we are approachable and courteous, we listen and are customer focused.

**Pride** – in the quality of our workmanship, to enhance the reputation of FE, we are committed to deliver, in an organized and dependable manner.

**Innovation** – we are creative and imaginative in a positive manner. We like to solve problems, think strategically and learn from our experiences.

**Adaptability** – we work in a collaborative and supportive manner, we embrace change and challenges, and have a positive “can-do” attitude.



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