

PRECISION ENGINEERING
Done the Right Way



About WYKEN ENGINEERING

For more than 70 years, Wyken Engineering has evolved to meet the demands of advanced manufacturing. What began in precision engineering has become deep expertise in the most challenging carbon composite applications. When carbon composites emerged as the leading brake material with major machining obstacles, we developed our own ultrasonic assisted drilling technology to push what is possible.

We are not a general machining facility. We are carbon composite specialists with precision engineering built around this focus. Today we are a trusted UK partner for carbon brake disc manufacturing in motorsport and aerospace, supported by our dedicated carbon facility, **AS9100 certified** quality, and a record of more than 3,000 discs produced with no delamination issues.

State-of-the-art WARWICKSHIRE FACILITY

Our purpose-built facility in Nuneaton, Warwickshire features comprehensive precision engineering services supporting complete component requirements:



Carbon
processing
area



Advanced
multi-axis CNC
machining



Precision
grinding
facilities



Quality and
inspection
infrastructure



Professional
coating and
finishing

Our **AS9100 certification** encompasses every production stage, from initial quote through final dispatch, ensuring consistent excellence across all sectors.






Ultrasonic **CARBON BRAKE DISC TECHNOLOGY**

The carbon composite challenge

Carbon brake discs represent the pinnacle of braking technology, offering exceptional performance-to-weight ratio, fade resistance at extreme temperatures, and thermal stability impossible with conventional materials. Commercial airliners, military fast-jets, championship racing cars, and business jets all depend on this technology.

However, manufacturing presents significant challenges. Carbon composites consist of interwoven fibre layers in a carbon matrix – exceptional for strength and thermal properties but catastrophically vulnerable to conventional machining.

Traditional drilling applies cutting forces that separate layers, pull fibres, and create invisible subsurface damage. This delamination compromises structural integrity and introduces hidden failure points.



Our proprietary ultrasonic solution



- Delamination-free manufacturing**
- Complex cooling geometries**
- Superior surface finish**
- Extended service life**
- Temperature performance**

Manufacturing process and quality control

Our carbon brake disc manufacturing uses ultrasonic drilling, controlled composite processing, automated in-cycle verification, precision finishing, and full traceable documentation to ensure consistent quality, regulatory compliance and reliable performance.

Proven track record

We have produced more than 3,000 carbon brake discs with no delamination failures, and this proven performance across motorsport, aerospace and defence reflects our technical capability, disciplined processes and focus on quality.



MOTORSPORT

Wyken Engineering delivers high-performance, reliable carbon brake discs for championship motorsport, supporting touring cars, GT, single-seater, rally and historic racing with rapid turnaround, weekend-ready supply, and technical partnership that optimises braking performance, consistency and driver confidence.

DEFENCE

Wyken Engineering supports MOD defence programmes with secure UK-based manufacturing of carbon composite and precision machined components for armoured vehicles and ground systems, delivering robust, traceable and fully compliant parts designed for harsh operating conditions where reliability and protection are critical.

AEROSPACE

Aircraft brake systems operate under extreme conditions. Commercial airliners convert Wyken Engineering supplies **AS9100 certified** carbon brake discs for commercial, military and business aviation, supporting platforms from airliners to fast jets with reliable, flight critical components backed by full airworthiness documentation, rapid AOG response capability, defence grade security and a proven record of delamination free performance in the most demanding aerospace environments.

Our carbon brake disc manufacturing capability supports diverse aerospace platforms:

Commercial airliner main landing gear

Military fast-jet brake systems

Business jet brake assemblies

Helicopter brake systems

Legacy aircraft support



Why should you choose **WYKEN ENGINEERING?**

Over seven decades of continuous precision engineering have prepared Wyken Engineering to meet the most demanding manufacturing challenges modern industry presents. We have built our organisation around technical capability, quality commitment and responsive partnership that distinguishes genuine specialists from general machining facilities.



Proven
ultrasonic
technology



Specialist
carbon
infrastructure



AS9100 quality
assurance



UK
manufacturing
security



Technical
partnership
approach



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