# Philosophy of Everyday Research

NIKKEN are committed to pushing the boundaries of advanced manufacturing and believe that this is reflected in our 'best in class' range of products. We continually strive to refine and improve our product range and service offering, an approach that has ultimately led to the new NIKKEN Innovation Centre for Europe (NICe).

The new innovation centre is a blueprint facility built on the Advanced Manufacturing Park (AMP) to provide innovative solutions to solve the manufacturing industry's toughest problems. Located at the heart of the UK manufacturing research and development community, with world-leading companies and research organisations in close proximity, the AMP is a perfect fit for NIKKEN to collaborate on challenging applications with global blue-chip organisations and technology leaders.

66 We knew that we would like to create a great place for research in advanced technology in order to succeed in the Aerospace sector. Now NICe is the global R&D centre of NIKKEN for any advanced manufacturing technology development - I believe that we are moving forward together to develop Advanced Technology for the future.

Akiharu Nagahama - President & CEO - NIKKEN Kosakusho Works Limited



**66** Opened in late 2015, The NIKKEN Innovation Centre is of Global importance, we take projects from our parent in Japan, from our customers around Europe and around the globe and we develop practical solutions. Looking in to the future we see more and more opportunities in those areas, in new material fields and new processes. **37** 

Tony Bowkett - CEO - NIKKEN Kosakusho Europe

# NIKKEN INNOVATION CENTRE EUROPE CAPABILITIES



## Global Network and Service

NIKKEN Kosakusho Europe is a subsidiary of NIKKEN Kosakusho Works Limited, Japan, and is the European Headquarters responsible for product development and innovation across the entire NIKKEN product range.

With operations across 3 continents, offices in over 70 countries and a product range of more than 15,000 lines, NIKKEN has earned and maintains a reputation globally for producing innovative products of the highest quality.

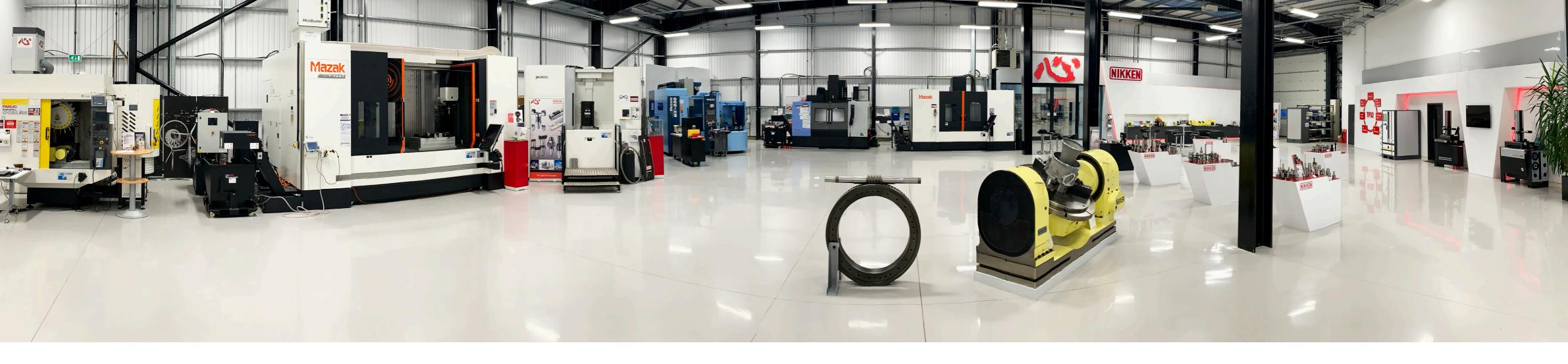
Our people are at the heart of our operations.



Our goal is the same where ever our team members may be: to uphold a unified standard of quality, performance and excellence in our products and to our customers.

NIKKEN Kosakusho is a market leader and continually improves the next generation of technology through extensive research and development. By collaborating with industry partners and combining training and knowledge, NIKKEN ensure that their customers can compete and win in their demanding market sectors.





# **Support and Process Optimisation**

The Innovation Centre demonstrates NIKKEN's capabilities on a range of multi-axis machining centres, which cover a diverse cross-section of industry requirements, supported both technically and academically by our advanced manufacturing engineering team.

The team can offer a range of services to support our customers, ranging from specific project-based activity to full technical partnership.

#### Services Available Include:

- Engineering and design consultancy
- First artefact machining
- Turn-key process delivery
- Offline programming
- Process optimisation
- Tooling recommendation & Cutting trials
- Benchmarking / comparative studies

- Dynamic Analysis-Resolving vibration issues hindering a process
- Investigation and process tuning
- Spindle condition monitoring
- Cutting force predictions using Vericut force module and Cut Pro

## **Machine Platforms**

The NIKKEN Innovation Centre is home to an extensive range of CNC machine tools of varying forms. Given the range of formats, tapers and layouts, we aim to provide a representative machining platform no matter what the application. This enables our team of highly skilled engineers to take processes offline and run optimisation, proof-of-concept, and cutting trials, without affecting production environments. The suite of machines enables us to test the full range of NIKKEN products, and benchmark against other available solutions.

## Machine Capabilities

- Full range of spindles and tapers
   (BT30, BT40, IT40, HSK63, BT50, HSK100)
- Both horizontal and vertical machining centres in a range of formats
- Turning centre

- Full 5-axis simultaneous machining
- High pressure through-spindle coolant options
- Range of machine controls (Fanuc, Heidenhain, Siemens, Mazak)

# Advanced NCT Tooling System

NIKKEN are able to provide a complete range of innovative spindle tooling to optimise machine performance, all machining disciplines benefit from the additional rigidity and improved accuracy and repeatability delivered by our advanced range of spindle tooling, Capabilities are further enhanced with our range of universal and fixed angle heads that facilitate additional detail and features that would normally require further operations and resources.

### Software Capabilities

NIKKEN has a full suite of CAD / CAM software and simulation packages, with specialist expertise in using these tools for a variety of applications. These include but are not limited to:

- HyperMILL
- EdgeCAM
- NX
- CATIA

- Fusion360
- SolidWorks
- VISI
- CutPro