MTT
MACHINE TOOL TECHNOLOGIES

The UK's Leading CNC Repair Specialist and Support Partner

CNC Specialist **Repair, Design, Build and Maintenance** Services

Improving profitability and lowering risk

About **Machine Tool Technologies**

We have invested heavily into developing unique solutions for our clients solving reliability, productivity and efficiency problems

Andy Spalding - Managing Director

Since its formation in 2001, I**SO : 9001** registered Machine Tool Technologies has developed a range of services that has seen it evolve into the **UK's leading provider** of technical support for machine tool users.

Machine Tool Technologies have committed significant resources into its graduate program to create a highly experienced and qualified team. We also work with some of the world's most renowned names in the industry to develop the latest in measurement technology. In doing this we've generated a reputation as a technology leader in its sector. This in turn has led to it gaining an impressive portfolio of clients around the world.

Central to Machine Tool Technologies success is our independence. This allows us to freely work with a choice of academia and industry partners to develop the skills of our team, creating experts in the fields of metrology, mechanical and electronic principles.

We're not just a service provider; we pro-actively work with clients to develop tailor-made solutions for both generic and unique technical problems. The long-term relationships that this engenders results in a much greater understanding of a customer's needs.

Service & Repair

Fast, expert support for critical machine uptime

- **Breakdown response**
  Rapid engineering support to diagnose faults and restore production as quickly as possible.
- **Machine relocation**
  Safe disconnection, movement and reinstallation of machine tools with minimal operational disruption.
- **Spindle assessment, repair & installation**
  Specialist spindle services to assess condition, restore performance and install correctly for reliable operation.
- **Installation**
  Professional machine installation to ensure correct setup, alignment and readiness for use.
- **Commission**
  Structured commissioning to test, configure and verify machine performance before full production use.
- **FATs, SATs**
  Factory and Site Acceptance Testing to confirm equipment meets specification before and after delivery.
- **Routine servicing**
  Planned servicing to reduce wear-related failures, improve uptime and extend machine life.
- **Calibrations**
  Calibration services to maintain accuracy, repeatability and confidence in machine performance.
- **Fault diagnosis**
  Root-cause fault finding to identify the real issue and prevent repeated breakdowns.
- **Repairs**
  Mechanical, electrical and control-system repairs to restore machine function safely and efficiently.
- **Replacements**
  Replacement of failed or obsolete components where repair is no longer the best option.
- **Assessments**
  Technical assessments to evaluate machine condition, performance issues and upgrade opportunities.
- **Training**
  Practical training to help operators and maintenance teams use and support equipment more effectively.

Our engineers are experienced in working across all major machine and spindle brands.

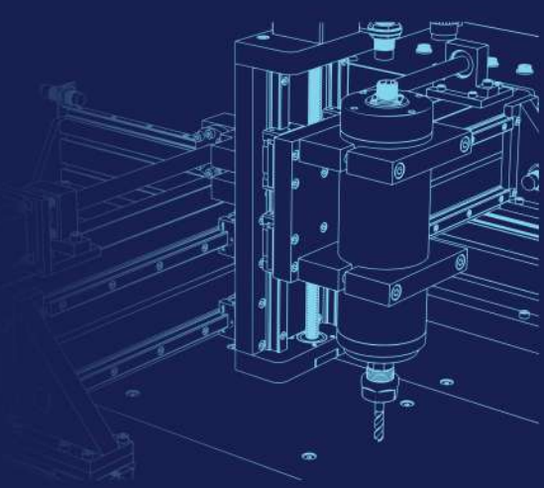
HAAS DMG MORI MADA MAKINO Matsuura PREMIUM MACHINE TOOL MANUFACTURER OKUMA Mazak XYZ Machine Tools

Specialist Spindle Services

From analysis and repair to rebuild and testing

- **Bearing replacement**
  Precision replacement of worn or failed bearings using high-quality components and correct fitting procedures.
- **Spindle strip down**
  Full disassembly and inspection of spindle assemblies to assess condition and required repair scope.
- **Component inspection**
  Critical parts checked for wear, tolerance issues, damage and suitability for reuse or replacement.
- **Test rig development**
  Controlled testing procedures used to validate spindle condition, repair quality and running performance.
- **Product compliance**
  Repairs completed with careful attention to technical standards, safety and machine compatibility.
- **Digital simulations**
  Supporting analysis and internal review processes to improve repair planning and rebuild accuracy.
- **Fast turnaround**
  Efficient repair processes focused on minimising machine downtime and returning spindles to service quickly.

- **Spindle rebuilds**
  Complete spindle rebuild services designed to restore accuracy, reliability and OEM-level performance.
- **Spindle analysis**
  Detailed spindle analysis to help identify root causes before repair work begins.
- **Spindle servicing**
  Preventative spindle servicing to reduce unexpected downtime and extend operational life.
- **Runout and vibration testing**
  Testing carried out to confirm spindle condition, stability and performance before return.
- **On-site engineer support**
  On-site support available where required for inspection, removal, refit and technical assistance.

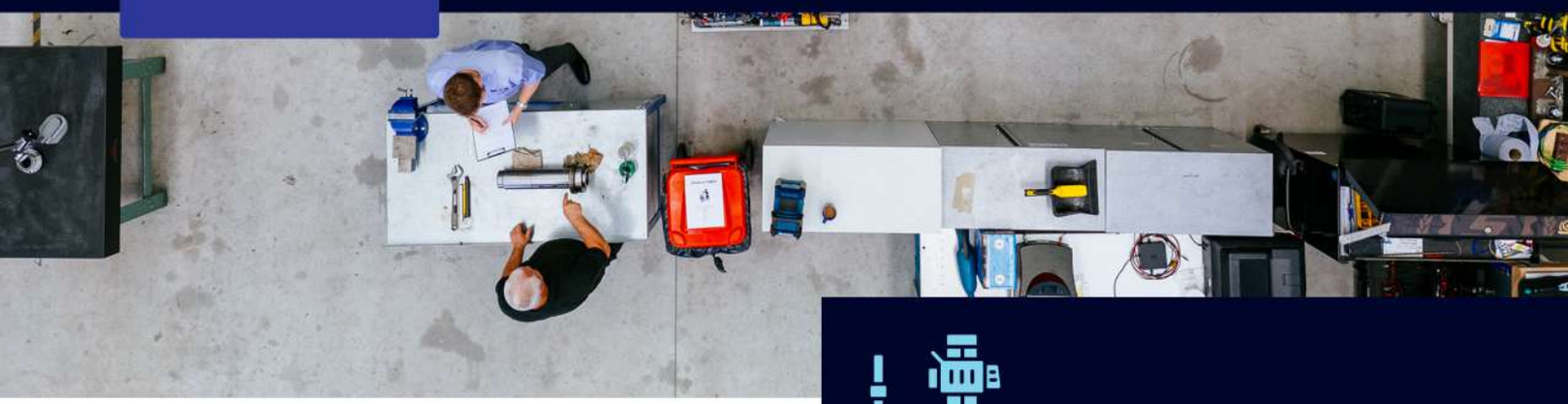


> *Backed by decades of engineering experience, we provide professional spindle repair, rebuild and servicing solutions trusted by manufacturers across the World.*

Dave Ellis - Product Manager

Retrofit & Upgrade

Modernising machinery to improve performance and lifespan



- **Control system upgrades**
  Modernisation of machine controls to improve reliability, usability and ongoing supportability.
- **Reverse engineering failed components**
  Reverse engineering services to recreate unavailable or obsolete parts and restore machine function.
- **Redesign of legacy parts**
  Redesign of older components to improve durability, compatibility and long-term maintainability.
- **Design of additional systems / upgrade**
  Custom upgrade design to add new functionality, monitoring or process improvements to existing machinery.
- **CAD modelling**
  CAD support for retrofit projects to confirm fit, layout and engineering feasibility before modification.
- **Simulations**
  Simulation work to assess upgrade performance and reduce design risk before implementation.
- **Design failure mode effect analysis**
  Failure mode analysis to identify risks early and improve the robustness of upgrade designs.

Custom Machine Design

From concept to engineered machine solutions

Concept and detail design

End-to-end engineering design support from early concepts through to fully developed machine solutions.

CAD development

Detailed CAD modelling to create accurate technical designs for manufacture, review and future development.

Physical prototype

Prototype development to test ideas in practice before committing to full production build.

Physical testing

Real-world testing to validate performance, identify issues and refine designs before deployment.

Test rig development

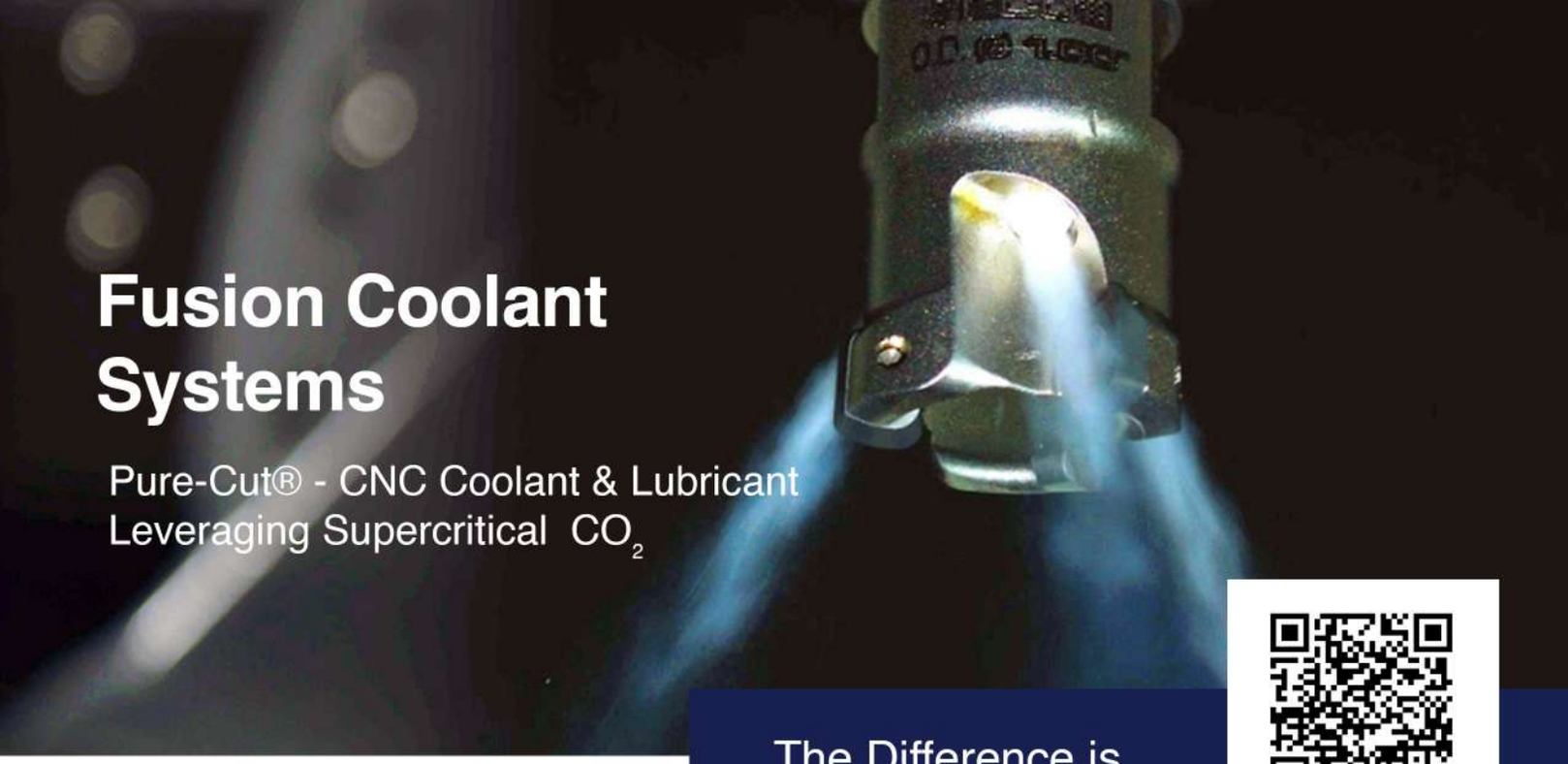
Custom test rig design and build for controlled development, validation and repeatable testing.

Proof of principle demonstrators

Early-stage demonstrators to prove technical feasibility before major project investment.

Our retrofit & custom machine design solutions are designed to improve machine efficiency, extend operational life and deliver lasting value, backed by a wide range of engineering expertise and practical experience.

Gary Christison - Service Director



Fusion Coolant Systems

Pure-Cut® - CNC Coolant & Lubricant
Leveraging Supercritical CO_2

FUSION
COOLANT SYSTEMS

Fusion Pure-Cut® and Pure-Cut®+ represent a cutting-edge, sustainable solution for CNC cooling and lubrication in machine tools.

Leveraging supercritical carbon dioxide (CO2) technology, these innovative systems deliver enhanced performance while significantly reducing your overall carbon footprint.

Advancing Productivity with Supercritical CO_2 Technology

Fusion Coolant Systems' Pure-Cut® and Pure-Cut®+ enhance CNC production efficiency by leveraging supercritical carbon dioxide (CO_2) for advanced cooling and lubrication. Fusion Coolants reduce heat and tool wear, enabling faster cutting speeds and higher material removal rates.

The dry machining process eliminates residue, reducing cleaning and maintenance time. As a leading solution for Fusion Coolants UK, these systems deliver superior performance, productivity, and sustainability for modern CNC operations.

The Difference is Supercritical

Find out more

Decrease Cycle Time

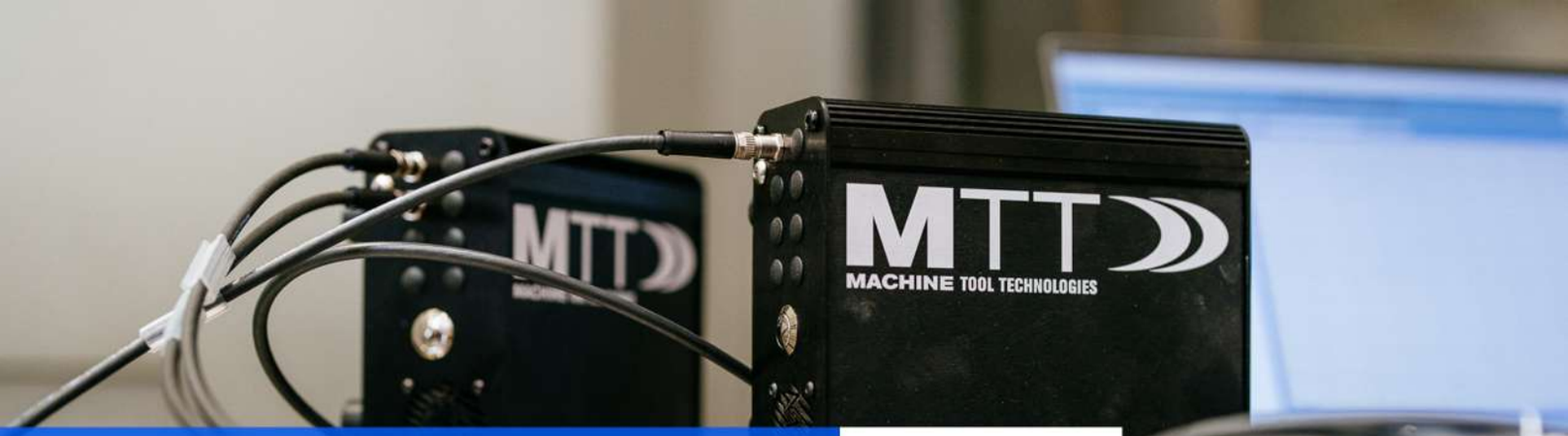
Delivers faster production rates, with up to 2x cycle-time improvement in certain applications.

ExtendTool Life

Helps significantly reduce tool wear, with tool life gains of up to 5x in selected applications.

Improve Surface Finish

Supports precise, high-quality surface finishes for demanding machining applications

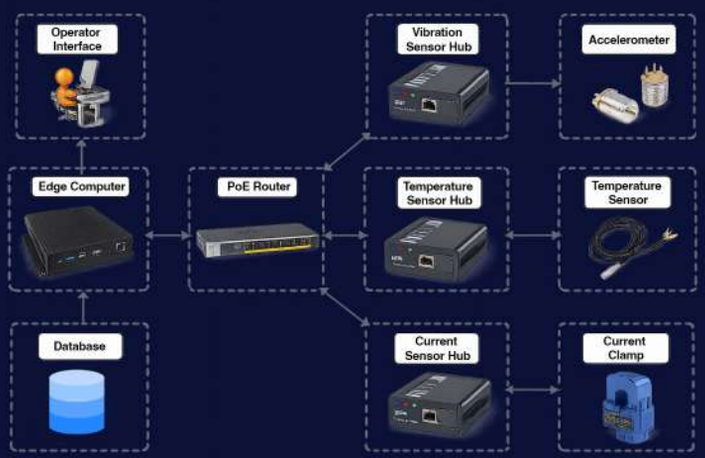


MTT Sensor Toolkit

Continuous Machine Monitoring and Predictive Maintenance

Find out more

Real-Time Machine Intelligence. Zero Guesswork.



Always-On Machine Intelligence

Sensor Toolkit gives you continuous, proactive monitoring so emerging machine issues can be spotted early, before they turn into costly downtime.

Built for Smarter Maintenance

By tracking vibration, temperature and current trends over time, MTT STK helps maintenance teams plan with confidence and act before performance drops.

Modular Monitoring for Modern Production

MTT STK is a flexible on-premises system designed to support efficient, data-led manufacturing across single machines or full sites.

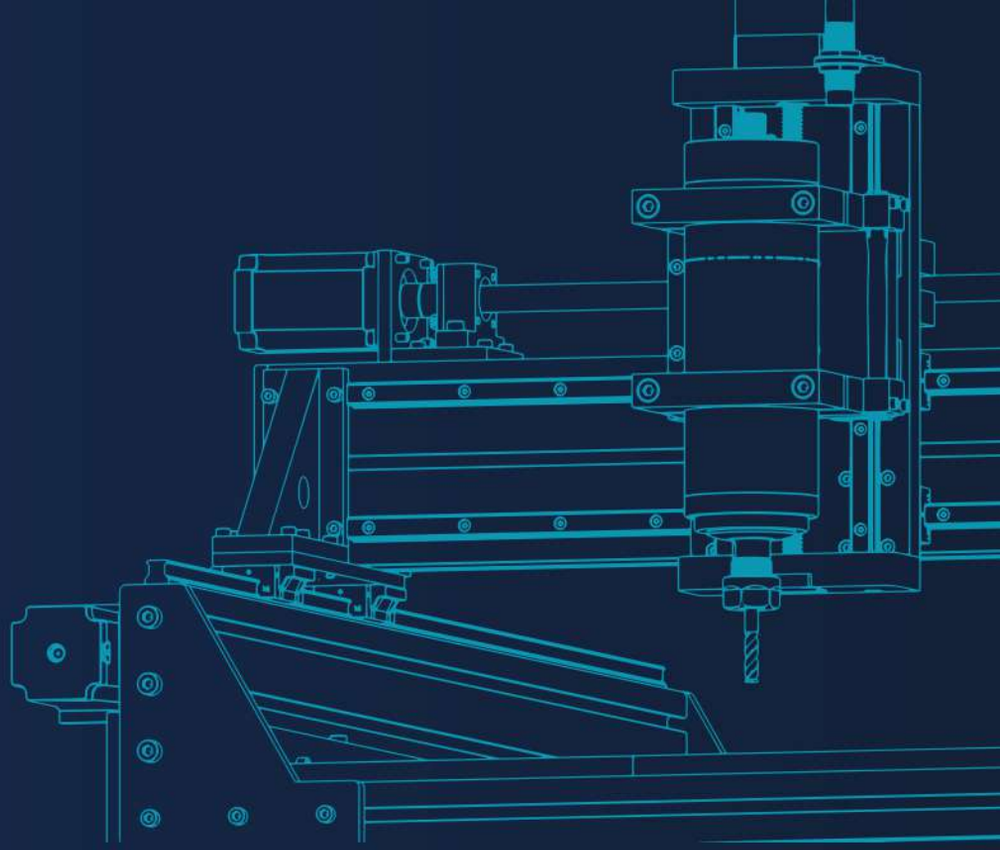
Introducing Sensor Toolkit a proactive, always-on monitoring system engineered by Machine Tool Technologies.

Continuous condition monitoring that reveals trends, predicts issues, and keeps production running at peak efficiency.

MTT STK is a modular machine monitoring system that captures vibration, temperature and current data, with optional OPC-UA connection to compatible PLCs. It helps users track machine condition over time, identify potential issues early, and support smarter maintenance planning.

MTT STK: What can you have today?

- Targeted vibration monitoring, 2–6 channels per module
- Up to 8 kHz measurement range
- Thermal monitoring, up to 102 sensors per module
- Temperature range: -55°C to 126°C
- Current monitoring, 4–8 channels per module
- OPC-UA connection to compatible OEM PLCs
- Factory overview dashboard
- Machine condition dashboards
- Focused data presentation screens
- Limited PDF reporting, customisable to client needs
- Export of data to client location
- On-premises solution as standard



Where Machine Reliability
Meets Engineering Expertise

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