



INDUSTRY BRIEF

Aerospace

Control systems that run every special process as qualified, with full traceability.



Control system engineering, integration and analytics since 1997
ISO 9001 certified • Cyber Essentials • CHAS • Constructionline • SafeContractor

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YOUR PRIORITIES

What matters most

Aerospace manufacturing and repair work to tight specifications on high-value parts, where a drifting process puts far more than the part at risk. Control systems for cleaning, heat treatment and testing must run each process exactly as qualified, trace every part and give auditors records they can trust.

Special processes, right every time

Cleaning, heat treatment and testing must run exactly to the approved specification on every run, because the result often cannot be fully verified by inspecting the part afterwards.

Traceability for every part

Every part and every process run must be traceable to the equipment, settings and people involved, with records that satisfy your customers, your AS9100 system and your Nadcap auditors.

Data you can trust

Process records must be complete, time-stamped and protected from change, so that a deviation is caught and explained at the time, not discovered at audit.

Controlled change

Once a process is qualified, any change to software, recipes or equipment must be assessed, approved and recorded before it reaches production, however small it looks.

WHAT WE WORK ON

Systems we engineer

- Component and blade cleaning lines
- Chemical processing and surface treatment
- Furnace and heat treatment control
- Test rigs and data acquisition
- Process recording and part traceability
- Maintenance reporting and diagnostics

PROJECT EXPERIENCE

Blade cleaning facility

Matrix delivered the control system for a blade cleaning facility. Every project we deliver follows the same approach: requirements and acceptance criteria agreed up front, logic tested against a simulation before site, and full documentation and test records at handover.

What this means on your project

Qualified processes are changed with care. We agree requirements, acceptance criteria and change control with your quality team up front, prove logic against a simulation before site, and test against the process specification. You receive traceable test records, version-controlled code and documentation ready for your customer and Nadcap audits.

STANDARDS

The standards that shape your project

Customers ask us first about standards. These are the ones we meet most often in this sector, and what they mean in practice.

Standard	What it covers	How we work with it
AS9100 (EN 9100)	Quality management for aviation, space and defence organisations, built on ISO 9001.	We support your AS9100 system with controlled change, version records and traceable test evidence.
Nadcap	Industry accreditation of special processes such as heat treating, chemical processing and non-destructive testing.	Process control, alarms and records designed around the audit criteria for your accredited processes.
AMS2750 pyrometry	Temperature sensors, instruments, calibration and furnace uniformity and accuracy testing for thermal processing.	Where your process is thermal, control and recording are designed to your furnace class and instrumentation type.
AS9145 (APQP and PPAP)	Advanced product quality planning and production part approval for aviation, space and defence.	Process control and data that support your process validation and production part approval evidence.
BS EN ISO 13849-1	Safety-related parts of machine control systems, rated by performance level (PL).	Safety functions designed to the performance level your risk assessment requires, then validated and documented.
IEC 62443	Security for industrial automation and control systems.	Segmented networks and controlled access that protect your process records and recipes.

The standards listed are those most often relevant to control-system work in this sector. Which apply to your project, and how, is agreed with you at specification stage.

The evidence you receive at handover

✓ Functional design specification	✓ I/O list and cause-and-effect	✓ Alarm list and HMI interface
✓ FAT and SAT records	✓ As-built drawings and source code	✓ Method statements for common faults

ABOUT MATRIX

Standards-led, fully documented control systems that you own and can support.

Matrix International (UK) Ltd has designed, built and supported industrial control systems since 1997. We take projects from specification and electrical design, through PLC, DCS and SCADA software, to installation, commissioning and long-term support, and we build the analysis software that shows how a plant is really performing. We are ISO 9001 certified and hold Cyber Essentials, CHAS, Constructionline and SafeContractor accreditation.

Siemens TIA Portal, S7 and PCS 7 • Rockwell • ABB • Schneider • Mitsubishi • Beckhoff • Emerson DeltaV • Honeywell • GE • WinCC, Ignition, AVEVA (Wonderware), FactoryTalk, iFIX and Citect SCADA

HOW WE DELIVER

From specification to long-term support

01 Specify

Requirements, applicable standards and risks agreed with you up front, itemised into a clear plan.

02 Design

Electrical and control design, PLC/DCS and SCADA software, to your standards and ours.

03 Test

Logic proven against a simulated plant, then factory acceptance testing before anything reaches site.

04 Commission

Installation, commissioning and site acceptance testing, planned around your operation.

05 Hand over

Full documentation, method statements for common faults, and training for your team.

06 Support

Maintenance, upgrades and analysis for the life of the system, with 24/7 cover under a support agreement.

WHY MATRIX

Why customers choose us

Standards first

An ISO 9001 certified quality system, designing to the standards your sector demands, plus any you specify.

You own the system

Clear structure, open interfaces and complete documentation, so you can support it yourself or with any vendor.

Tested before site

Control code is version-controlled and tested against a simulated plant before factory and site acceptance.

Multi-vendor

Siemens, Rockwell, ABB, Schneider, Mitsubishi, Beckhoff, Emerson, Honeywell and GE platforms.

In it for the long term

For us a project is not finished until the control system is decommissioned. 24/7 support is available under a support agreement.

OUR PROMISE

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Talk to us about your project

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