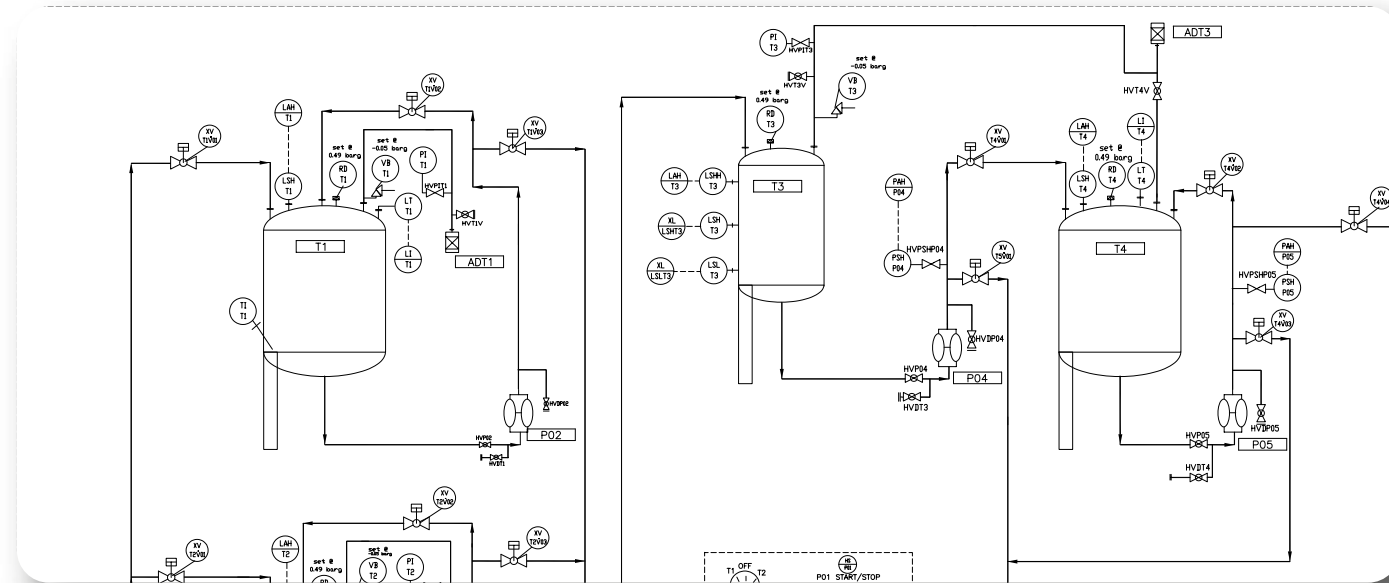




PROCESS ENGINEERING

EPC PROCESS ENGINEERING AND DESIGN



- ✓ Feasibility studies
- ✓ Full Process & MEICA design
- ✓ Scalable Pilot Process Plants (SPPP)
- ✓ CDM-compliant project delivery
- ✓ Compliant, audit-ready documentation
- ✓ Hazardous plants ATEX/DSEAR

CXControls offers full-process plant design and project management services across multiple industries, delivering a full end-to-end service.

From skid and container-packaged equipment to full-process and manufacturing facilities, CXControls delivers a full concept-to-commissioning service and beyond.

Our supply chain partners are fully QA-checked and have no ties to suppliers, so we offer the best, fully independent technology solutions. Combined with our system integration knowledge and expertise, our solutions drive efficiency in the design of packaged plants and Turnkey Solutions.



Designs delivered in accordance with relevant industry standards:
See more in our [System Integration Brochure](#).

PROCESS DESIGN JOURNEY

STAGE 1:

CONCEPT DEVELOPMENT & REQUIREMENTS

- FEED / Concept Design Studies.
- Scalable Pilot Process Plants (SPPP)
- Client Specification (CS).
- User Requirement Specification (URS).

STAGE 2:

PROCESS & MECHANICAL DESIGN

- Function Design Specification (FDS).
- Process Flow Diagrams (PFD).
- Process and mechanical design.
- Piping and Instrumentation Diagrams (P&IDs).
- Instrument/valve data sheets.
- Equipment specification and procurement BOM.
- 3D Modelling.
- Regulatory Compliance check.

STAGE 3:

SYSTEM DESIGN, CONTROLS, INSTRUMENTATION

- Hardware Design Specification (HDS).
- Software Design Specification (SDS).
- Control System Architecture drawing.
- Control Panel Design.
- CAD Services.
- System Architecture.

STAGE 4:

INSTALLATION, TESTING & COMMISSIONING

- Installation document packs (Build to print)
- Commissioning Qualification Documents: FAT, HAT, SAT, CAT.
- Operator training documentation.
- Plant optimisation.

STAGE 5:

DOCUMENTATION & HANDOVER

- Full documentation Handover via client portal using our own Electronic Document Management System (EDMS) or incremental digital handover.

MEICA DESIGN SERVICES

Complete Mechanical, Electrical, Instrumentation, Control & Automation (MEICA) Design

From the service point of supply to all process/manufacturing interface points, including metering, consumption, waste discharges, and all monitoring.

CXControls will design and project manage all feed-in and waste services, including:

- ✓ Full electrical distribution
- ✓ Waste discharges
- ✓ Compressed air
- ✓ Heat networks
- ✓ Nitrogen
- ✓ Metering and monitoring



EARLY ENGAGEMENT

- Feasibility surveys and reports.
- CAPEX justification support.
- Return On Investment (ROI) support.
- Technology delivery roadmaps.



ME&IC-DESIGN, INSTALL, COMMISSION

- Mechanical plant & equipment.
- Process plant & equipment.
- Electrical distribution: transformers, switchgear, sub-distribution.
- Control panels & equipment.
- Instrumentation, measurement & control.



AUTOMATION

- PLC & DCS.
- HMI & SCADA.
- MES.
- Enterprise IoT/IIoT solutions.



ENGINEERING CONSULTANTS

Engineered solutions for regulated and other industries, including Chemical, Oil and Gas, Nuclear, Life Sciences, and Manufacturing sectors.

HAZARD & SAFETY SERVICES

- Hazardous area assessment ATEX/DSEAR.
- Hazardous area control systems design and documentation to IEC 60079-14.
- Intrinsically safe circuit verification.
- CompEx Ex12 design engineers, CompEx Ex1-4 inspections.
- Functional Safety & Safety Instrumented System (SIS) design to BS EN61511/BS EN61508.
- Machine safety design to EN ISO 13849.
- Safety Integrity Levels-SIL 1 to SIL 3 design to IEC 62061.

SYSTEM VALIDATION

- GAMP 5/FDA compliant design.
- 21 CFR Part 11 compliance.
- Validation support-IQ, OQ & PQ.



- ✓ Regulatory Compliance
- ✓ Safety & Reliability
- ✓ ATEX/DSEAR
- ✓ Project lifecycle support
- ✓ Versatile Expertise
- ✓ Future-Proofed Solutions



OUR MARKETS

- ✓ **COMAH:**
CXControls operate on COMAH Tier 1 sites, providing project solutions to highly hazardous COMAH plants.
- ✓ **ATEX:**
CXControls delivers project, control and automation solutions compliant with ATEX directives, ensuring safe operation in explosive and hazardous environments.
- ✓ **NUCLEAR:**
CXControls understands the requirements and barriers in a regulated industry and has operated in Nuclear power generation, reprocessing and defence and can provide systems compliant with Nuclear Site Licensed Conditions (SLC).
- ✓ **PHARMACEUTICAL:**
CXControls provides engineering and control solutions in the Life Sciences and Bio Industries and is fully compliant with GAMP 5 and GDA requirements.
- ✓ **MANUFACTURING AND MACHINE BUILDING:**
CXControls designs, builds and integrates machinery with bespoke control systems, enhancing machine performance, safety, and reliability across a range of industrial applications.
- ✓ **ENERGY TRANSITION:**
CXControls can support the latest developments in the sustainable energy markets. This includes energy from waste, off-grid urban energy schemes, renewables including hydrogen fuel, and research and development in alternative fuels.

cxcontrols



Cert No. 11635
ISO 14001, ISO 45001,
ISO 9001

Full Services list:

System Software Integration

Business Transformation

Process & MEICA Project Consultancy

Modular Manufacturing

Control Panels

Specialist Engineering Resources

Offices & Workshop:

Units 12/14
Cartrefi Conwy Business Park,
Mochdre, Conwy,
LL28 5EF, UK.

-

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61 Mosley Street, Manchester,
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Learn more on
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