richard alan

TOTAL ENGINEERING SOLUTIONS

Richard Alan

MECHANICAL

STRUCTURAL

ELECTRICAL

PROCESS

Tel: 01924 467040

Web: www.richardalan.co.uk


“ THE ONLY WAY
TO DO GREAT WORK
IS TO LOVE
WHAT YOU DO ”
richard alan engineering

INDEX

"Richard Alan is fundamentally an engineering company dedicated to surpassing customer expectations, by providing superior products and services customised to meet the unique requirements of each client"

Robert Johnson
Managing Director

THE GROUP

The Richard Alan Group comprises of 4 separate companies all of whom compliment each other, offering our clients a total solutions package.

richard alan group
UNITED IN AMBITION

richard alan engineering

Richard Alan Engineering is a leading force in the design, fabrication, installation and commissioning of Tanks, Vessels & Silos, as well as structural steelwork, EI&C & pipework for the chemical, pharmaceutical, cosmetic, oil & gas, renewable energy, manufacturing, food & drink and water industries, throughout the UK and Europe..

www.richardalan.co.uk

pumps & gearboxes

Specialising in the selection, supply, repair and service of pumps, gearboxes, motors and inverters for the domestic, commercial and industrial sectors. Their ranges include Positive Displacement Pumps and Centrifugal Pumps from a variety of leading manufacturers with gearboxes, motors and inverters available from renowned producers including our sister company Yilmaz UK Ltd.

www.pumpsandgearboxes.co.uk

YILMAZ REDÜKTÖR

In 2015, Yilmaz UK Ltd became a Richard Alan group company. They are the UK assembly centre for European industrial gearbox manufacturer Yilmaz Reduktor and have a vast portfolio of industrial gearboxes, electric motors and variable speed drives for a wide range of industries. Standard products are of a European footprint design and are therefore interchangeable with many other manufacturer's products.

www.yilmazuk.co.uk

scaffolding access solutions

Specialising in the supply and erection of platform systems, they can develop a total access plan for any project. With a comprehensive understanding of the challenges that arise within differing working situations, from small access towers to major construction works. Their design and calculation facility can cater for load bearing, weather protection, independent access and temporary roof cover scaffold types.

www.scas.co.uk

UNITED in AMBITION

ENGINEERING. SCAFFOLDING. PUMPS. GEARBOXES

ABOUT US

LONG PEDIGREE

Founded in 1970 and now operating from our large manufacturing facility in Dewsbury, West Yorkshire; Richard Alan Engineering is one of the oldest, most innovative, ambitious and capable engineering firms in the UK.

WORLD CLASS ENGINEERING

Our strength lies in our ability to deliver world-class engineering solutions. Integral to our business are our skills in: sheet metalwork, structural steelwork, process pipework and mechanical, electrical, instrumentation and control. Over the years, we have built our company on excellence in engineering and fabrication, ingenuity in design, and an ongoing investment in the skills of our people.

PEOPLE POWER

The saying "A business is only as good as its people" means that a company's employees are the foundation of its success and the satisfaction of its customers. We recognise that our employees are vital to our business success, as they are responsible for carrying out the company's mission, purpose, and tenets, thats why Richard Alan prides itself on securing and retaining the very best people within their fields.

Our integrated engineering solution includes;

- **Design, manufacture & installation of Tanks, Vessels, Silos & Specialist Products**
- **In-house fabrication, pipework & fitting**
- **Structural steelwork design, manufacture & installation**
- **Electrical, instrumentation & control design & install**
- **Project management**
- **Principal Contractor**
- **Principal Designer**


Lifter
Lifter

HEALTH AND SAFETY

Richard Alan spends over half a million working hours on customer sites each year. The company emphasises health, safety, and the well-being of employees, and acknowledges its corporate responsibilities to a wider circle of stakeholders. The aim is to create a working environment free from work-related accidents, dangerous occurrences, and ill health. By adhering to the HSE's 'Managing for Health & Safety' (HSG65) guidelines, the company ensures compliance with current legislation and maintains high internal standards.

DESIGN

“Design is intelligence made visible” *Alina Wheeler*

Richard Alan Engineering has a wealth of experience taking client's concepts and ideas to a finished product.

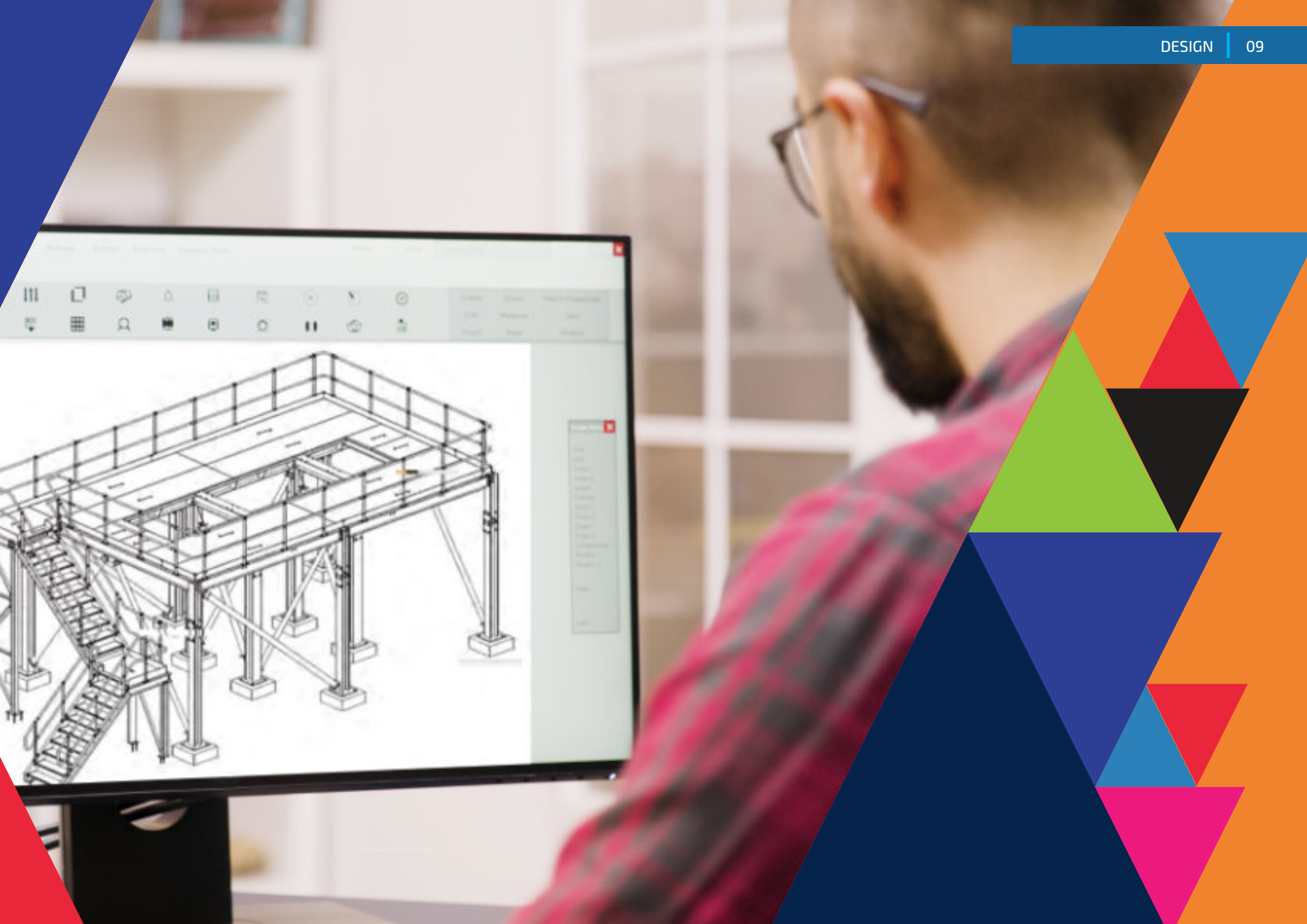
Employing a team of experienced designers, who are specialists within their given field; we work closely with our clients to create a bespoke solution to their process or storage challenges.

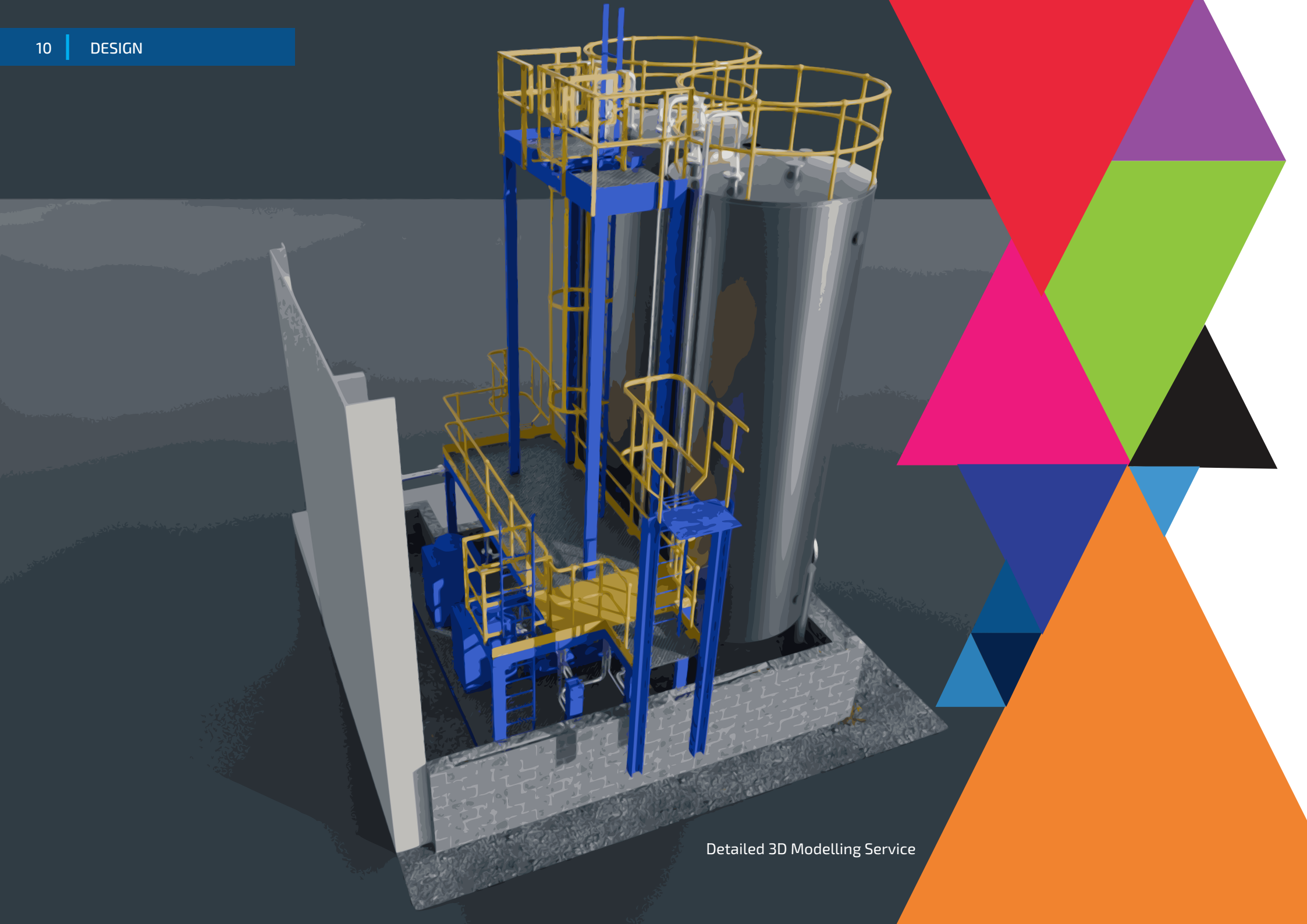
Our large team of designers and draughtsman specialise in 2D and 3D modelling with the additional capacity to work with Building Information Modelling (BIM). We can develop and prepare drawings and models from specifications and outline plans, allowing clients to fully visualise the finished product.

We also provide a 3D point cloud scanning service, which is accurate to within a few millimetres, so provides an accurate and detailed information of your site, therefore reducing the number of site visits required. We can then use the scan to overlay new structures or equipment, therefore avoiding any potential issues during installation.

In-house 3D Scan Service

MECHANICAL. STRUCTURAL. ELECTRICAL. PROCESS





Detailed 3D Modelling Service

OUR DESIGN SERVICES

MECHANICAL

Our dedicated team of Mechanical Design engineers work tirelessly on providing innovative and cost effective solutions for our clients. Ensuring that all relative design standards are met, whether that be a for a storage tank or pressure vessel through to specialist bespoke equipment.

ELECTRICAL

Using practical knowledge and experience, our in-house team of electrical design engineers, can deliver a full suite of cost effective, innovative and safe design solutions for all aspects of electrical, control and instrumentation.

STRUCTURAL

With an in-house team of specialist, structural, design engineers, we are are able to custom design your project, using the latest software and tools to deliver the most efficient and cost effective solution.

PROCESS

Our team of process engineers provides comprehensive services encompassing all aspects of a plant's processes. In collaboration with our clients, we work closely with their teams and serve various industries including chemical, food and beverage, renewable energy, oil and gas, among others.

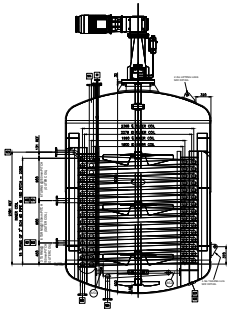
DESIGN FOR ALL

From a single bespoke pressure vessel to a complex turn-key factory expansion, a detailed design is essential to ensure a smooth project delivery, on time and within budget.

Clients turn to Richard Alan for our expertise in delivering straightforward solutions to complex problems. Our engineering design team excels at integrating intricate process pipework into restricted spaces, specifying operational conditions, and calculating loads. These tasks form an integral part of our daily operations.

Our range of design tools include:

- **STAAD Pro V8i Calculation for structural analysis and design**
- **TEKLA 3D structural modelling and drawing**
- **FINGLOW / PV Elite Pressure vessel and heat exchanger design, analysis and evaluation**
- **AutoCAD 2017 / Autodesk Inventor Professional 2017 2D and 3D mechanical drawing and design for vessels, pipework, skids, GA's**
- **Intergraph CADWorx Pipework modelling and the production of isometric fabrication drawings**



FABRICATION

LARGE MANUFACTURING FACILITIES

Founded in 1970 and based in Dewsbury, West Yorkshire, Richard Alan Engineering is a pioneering and capable UK engineering firm.

Our 80,000 sq.ft. facility and growing team of experienced engineers, fabricators, and welders enable us to handle all fabrication aspects for any commercial project, whether large or small.

We deliver projects directly to clients or as part of a turnkey in-house installation. With expertise in stainless steel, carbon steel, and exotic metals, we excel in skilled manufacturing across various capabilities.

DfMA

With a focus on design for manufacture and assembly (DfMA) and off-site modular builds, we can offer our clients flexibility over project control. Designing, manufacturing, assembling and testing products in-house prior to delivery, reducing disruption to site operations and offers benefits in terms of costs and times scales.

Our manufacturing facilities include;

- **3 x sites offering over 80,000sqft of manufacturing facilities**
- **2 x 15 tonne & 2 x 10 tonne traveling cranes**
- **Segregated manufacturing areas for both carbon steel and stainless steel to prevent cross contamination**
- **20mm Plate rollers**
- **Fully coded welders**
- **In-house NDT & Xray facilities**
- **In-house machine tooling CNC facility**
- **Pickle & Passivation**
- **Polishing**


RC 10t
RC 10t

Storage Tanks

Richard Alan, designs, manufactures and installs welded upright & horizontal storage tanks for most applications and industries including; Pharmaceutical, Chemical, Oil & Gas, Cosmetic, Water, Dairy, Renewable Energy, Nuclear, Food and Beverage.

Our highly experienced team of design engineers, use the latest 2D and 3D software, ensuring the optimal tank solution is achieved, every time.

With capabilities of manufacturing a range of storage tanks from 10lts to 250 tonnes, in either single skin or double walled to allow for bunding or medium circulation. We also offer internal or external coil heating or cooling systems as well as insulation and cladding.

As we manufacture to order, we can customise your storage tanks to your unique specifications. We also offer tank lining options including, Rubber, PFA, PTFE and other protective coatings.

Storage tanks are fabricated and assembled under our ISO9001 management system by skilled and coded welders to EN ISO 9606-1 2017 and BS EN 287-1 2011, providing confidence to customers of a high-quality product.

We work with the following materials

CARBON – STAINLESS STEEL – DUPLEX – EXOTIC METALS

Elements to consider when requesting a quote

Tank Dimensions

- Overall height, diameter & width if ordering a rectangular tank
- Inlet and outlet nozzle sizes and locations.
- Manhole and inspection port dimensions & position

Material Specifications

- Specify material of construction e.g carbon, stainless steel (304, 316L) duplex etc.
- Include any special finish, coatings or linings if applicable.

Structural Details

- Shell and head design (e.g., flat, dished, conical, or elliptical heads).
- Support structures (e.g., legs, saddles, or skirts).
- Foundation requirements (if applicable).
- Single skinned, double skinned/bunded

Product

- Product/s to be stored, mixed, blended
- Maximum product density / Maximum product viscosity

Pressure and Temperature Ratings

- Maximum allowable working pressure (MAWP).
- Maximum/Minimum temperature range.

Accessories

- Level gauges, pressure relief valves, thermometers, explosive panels, agitation and other instrumentation.

Structural Steelwork

- Ladders, safety rails, platforms, or stairs for access.

Insulation

- Does the tank require external insulation

Surface Finish

- Mill finish or polished to a Ra value for internal or external surfaces

SILO STORAGE

SILO MANUFACTURING FACILITIES

Silos are used for the bulk storage of products and are utilised by most industries. They can be manufactured for both industrial and hygienic environments and produced in a variety of sizes, with capabilities to manufacture up to 20mts in length and 4.7mts width.

We can manufacture in a variety of materials including carbon steel or stainless steel and painted to customer specifications, with steel-work support frames or skirted bases completing our silo offering.

Richard Alan's design department uses sophisticated modeling software to provide simple, visual solutions to complicated questions, by taking into consideration the operating conditions and calculations of the space and loads that the silos will be subjected to.

All our Silos are designed to
BS EN 1993-4-1.

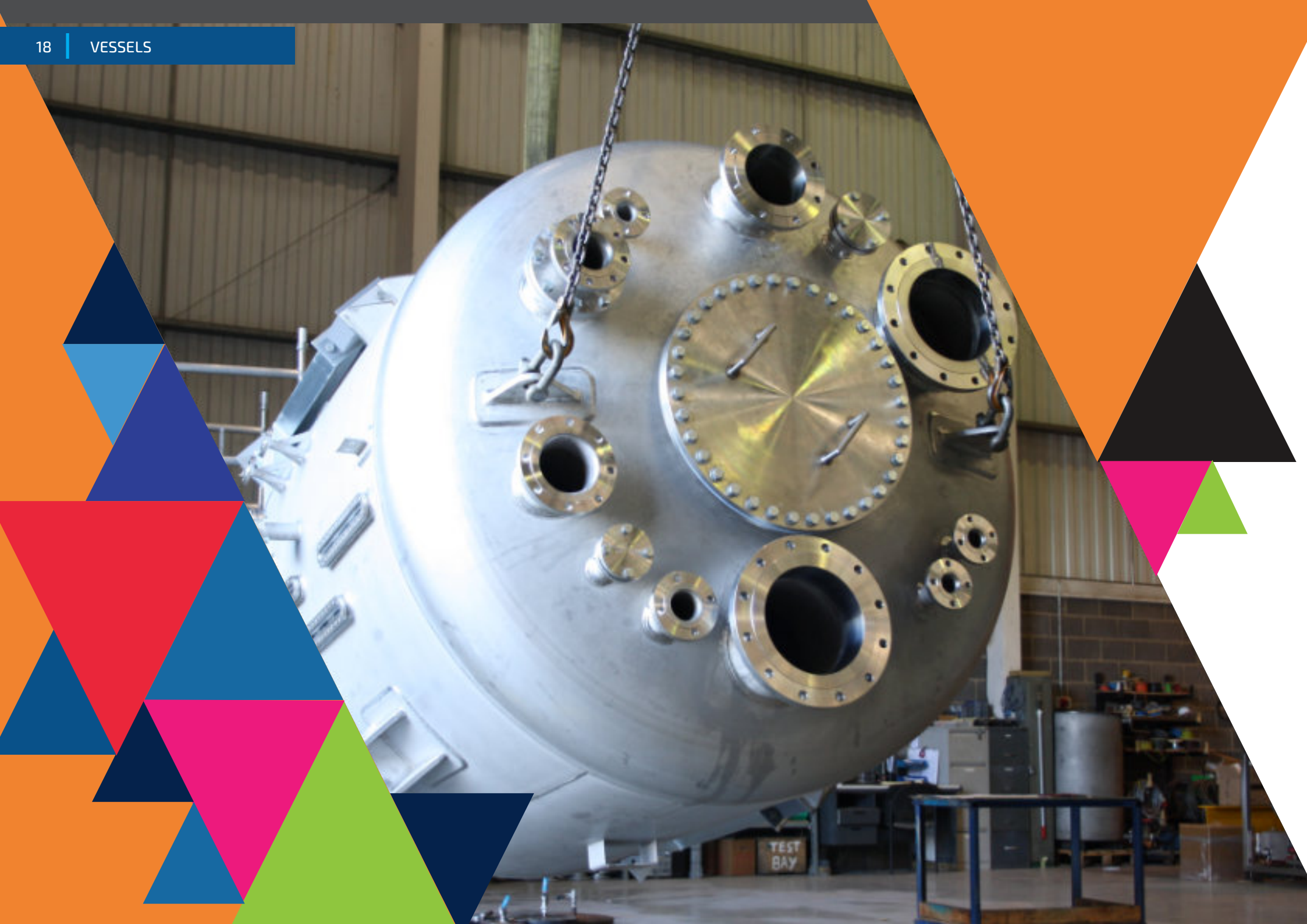
TANK FARM

We specialise in tank farm design, modeling, manufacturing and installation, including associated structural steelwork, pipework and EI&C. - Speak to a member of our sales team for more details.

Our Silo options include;

- **Flat Bottomed, 4 legged or skirting**
- **Load cells for weight management**
- **Safety ladders, railings and platforms**
- **Thermal & acoustic insulation along with cladding**
- **Hoppers and screw/blower conveyors**
- **ATEX Rated Equipment/Instrumentation**
- **Explosive panels**
- **Pressure relief & rotating valves**
- **Instrumentation**


richard allan


TEST
BAY

Vessels

We design, manufacture and install Pressure, Reactor & Vacuum vessels in a range of materials to suit a variety of industrial applications.

Pressure vessels are enclosed containers used to hold liquids, vapors, and gases at a pressure significantly higher or lower than the ambient pressure. They are widely used in various industries such as Pharmaceutical, Petrochemical, Oil and Gas, Chemical, and Food processing industries.

Vacuum cooking vessels are normally used for large scale commercial cooking. These types of vessels allow the operator to cook the product at a lower temperature, therefore reducing the cook time. This method can also improve the texture and taste of a product due to the lower temperature.

Our design engineers, all of whom possess the relevant skills and site-safety qualifications to carry out comprehensive site surveys, will ensure that each vessel system is designed to your specific requirements. They can then be manufactured using a number of materials including stainless steels, carbon steels, duplex steels, and exotic metals.

Each Pressure & Vacuum Vessel is fabricated by coded welders to the ASME IX and BS EN 287-1 standards.

Pressure Vessel types include:

- Horizontal & vertical cylindrical pressure vessels
- Multi-compartmental pressure vessels
- Reactors
- Blending vessels

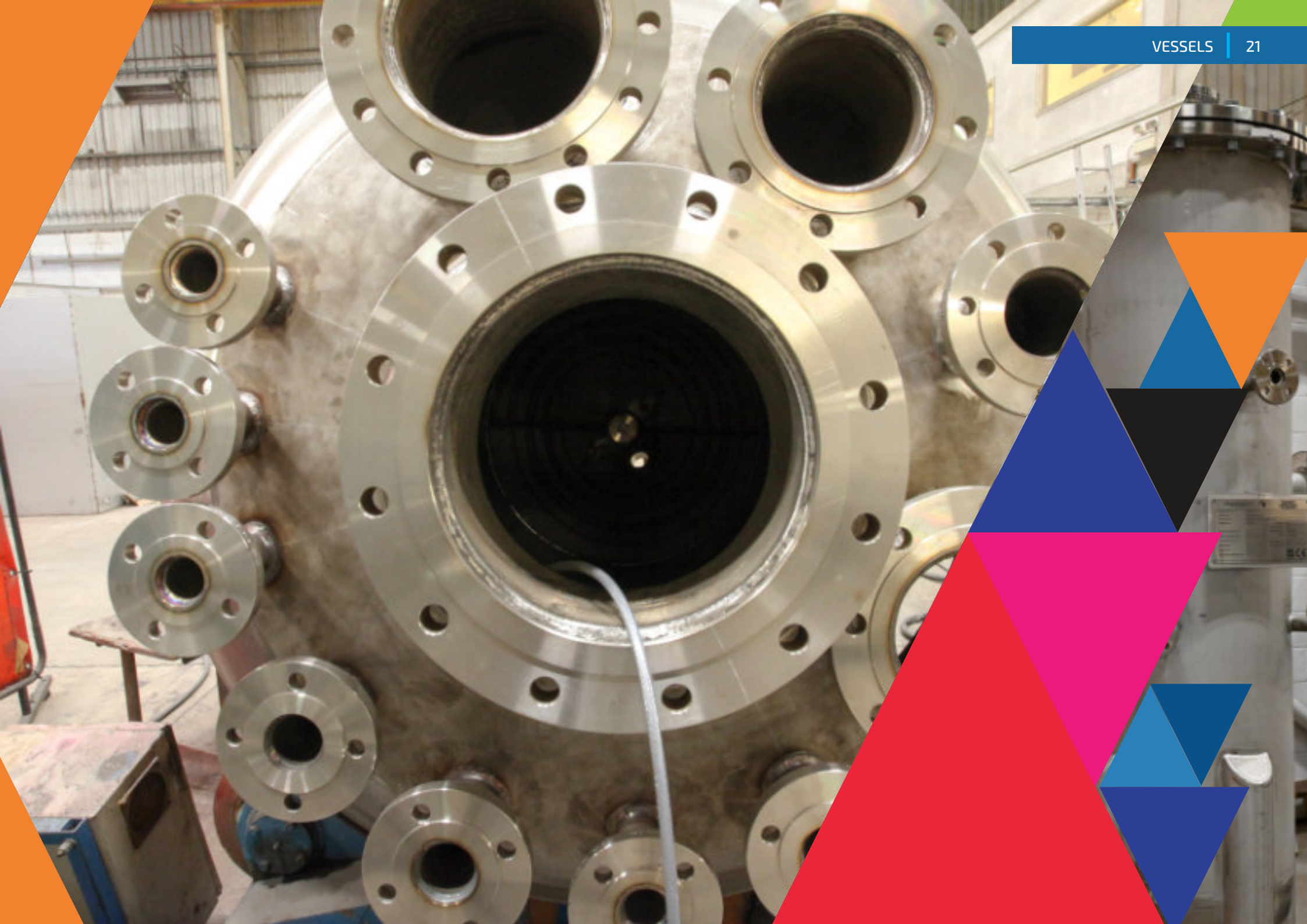
Pressure & Vacuum vessels can be supplied with associated ladders, platforms, agitators or be skid mounted.

All pressure/Vacuum Vessels are designed to the following codes

- BS EN 13445
- PD 5500
- ASME VIII Div.1 (Non-Code Stamped)

All in accordance with PE(S)R SI/2016/1105 or PED 2014-68-EU where required

All our designs can be backed up with FEA analysis if required.



HYGIENIC VESSELS

Richard Alan offers a range of storage, Cooking, Mixing & Blending vessels, utilising over 50 years of experience to deliver a vessel that compliments your recipes.

Traditional commercial cooking vessels use atmospheric cooking, which utilises a jacket. They can be used for a multitude of recipes including, but not restricted to, the manufacture of Beverages, Sauces, Preserves, Condiments, Confectionery, Pharmaceutical and Cosmetic products.

PHARMACEUTICAL / COSMETICS

We offer quality specification vessels where high performance and hygiene is required, which includes polishing to 0.1 *µmRA*

FOOD PRODUCTION

Our food production vessels and other storage & mixing products, offer quality, hygienic, long lasting equipment that meet all stringent Health & Safety regulations

HYGIENIC VESSELS

BREWERY

Richard Alan's stainless steel tanks are suitable as excise, fermentation and storage tanks designed specifically for the brewing and distilling industries

SOFT BEVERAGES

From the hygienic storage of ingredients to temperature controlled mixing vessels, Richard Alan can work with you to produce bespoke equipment to meet your production aspirations

MIXING SOLUTIONS

Richard Alan offers a range of mixers and blenders to compliment your new tank or vessel.

We understand that designing a vessel with a mixer, requires a different approach from a standard vessel. There are a number of parameters to consider, including the positioning of the mixer. This can be top, side or bottom mounted. Each of these positions will create a different mixing method and may impact on your product. We can incorporate 2 or more of the mixer options in one vessel to ensure an optimal product outcome.

Our mixing experts can offer impartial advice as well as help with product selection.

We offer the following mixer solutions

- Horizontal & Lateral Agitators
- Contra Rotating Agitators
- Scrape Surface Agitators
- Ribbon Blender
- Top & Bottom Mounted High Sheer Mixers
- Mobile high sheer mixers
- Inline mixers

Filter

BESPOKE PRODUCTS

Richard Alan's range of services and in-house expertise puts us in the ideal position for the design, fabrication and commissioning of specialist, customised or bespoke products.

Richard Alan's **Special Projects Design Team** work closely with many clients to develop their ideas and basic concepts into fully functioning, commercial products.

Over the years we have produced many specialist products unique to the client including; Granulators, Extructors, Screw Conveyors, Cyclones, Filters, Carbon Capture equipment, Steam Sterilsing Towers plus many more.

Speak to a member of the Sales Team if you have a concept you wish to develop with the aid of our expert design engineers.

Steam Sterilising Tower

Flat Bed Absorber

Distributor Sparge

We manufacture in the following pipework materials

- ABS
- UPVC
- Polypropylene
- PBDF
- Stainless Steel - 304 & 316
- Carbon Steel
- HDPE

Pipework

Richard Alan has vast experience in the design, manufacture and installation of process pipework. Our state of art manufacturing facilities allows the segregated fabrication of pipe-spools in a variety of materials and sizes.

Our design team can produce bespoke pipework designs from customer drawings or designs compliant to the appropriate project design code such as ASME B31.3, ASME B31.1 & BS EN 13480, for various industries and applications. We have an in-house design facility to model and generate fully detailed isometric drawings, complete with weld maps, weld details and material lists.

Richard Alan has the in-house capacity to carry out all aspects of pipework fabrication. Using either customer drawings or bespoke designs created by our in-house engineering designers, our team produce high quality pipework fabrication for a range of environments and applications:

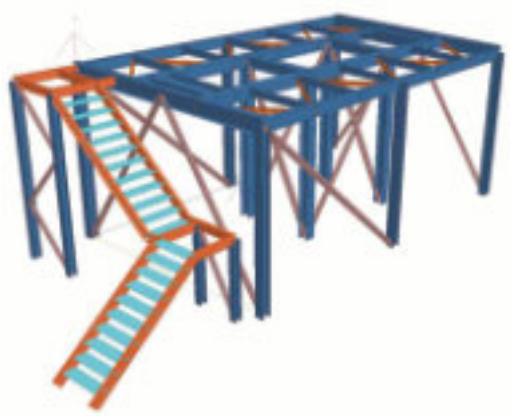
- **High/low temperature**
- **High pressure**
- **Trace heated**
- **Thermally insulated**
- **Lined**
- **Hazardous/corrosive chemicals**

We offer in-house testing, NDT and radiography where required

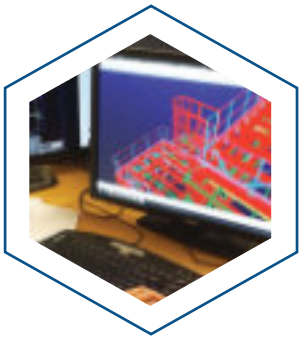

SP 45
SP 38
F404

STRUCTURAL STEELWORK

“Richard Alan is a well established, specialist, structural steelwork design, fabrication and installation provider”



Steelwork



Design

Fabrication

Installation

Steelwork Design

To complement our range of storage tanks, Richard Alan designs, fabricates & installs structural steelwork.

With an in-house team of specialist structural engineers, we are able to custom design your equipment, using the latest software and tools, to deliver the most efficient and economical solution.

Richard Alan are approved and deliver a UKCA/CE marked product, fully compliant with BS EN 1090 and are accredited to execution class 2.

Richard Alan also offers a 3D scan service, allowing small areas or a whole site to be accurately scanned, allowing our designers to insert models of the new steelwork.

Tekla Structures software is used to model steelwork in 3D, producing accurate, reliable and detailed designs:

- **Assembly drawings and build sequences**
- **Component detailing**
- **Parts lists and design data output**
- **Rapid implementation of design changes**

Revit LT provides greater visualisation and communication of designs supporting BIM workflows. Utilising STAAD Pro, analysis and optimisation of steelwork structures can be completed in accordance with over 90 international design codes. All new designs are carried out to the latest standard -Eurocode 3 – BSEN 1993-1-1

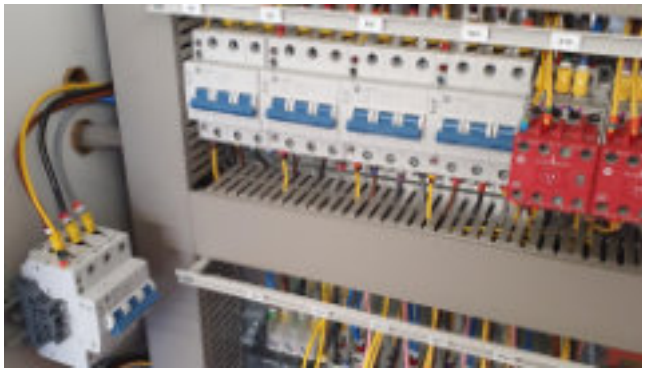
Steelwork Installation

The steelwork installation team is trained and qualified in the various disciplines needed to execute the work safely and efficiently.

Led by experienced project managers and supported by the company's stringent health & safety procedures, the steelwork installation team prides itself on delivering a first-class service, time after time.

EC&I






“Having our own in-house electrical department means we can offer our clients a total support package for their projects”

Using practical knowledge and experience, our in-house electrical design engineers, can deliver a full suite of cost effective, innovative and safe design solutions for all aspects of electrical, control and instrumentation design.

Detailed designs cover the full range of services from; intelligent instrumentation and associated communication networks through to LV distribution systems and networks. Under the CDM 2015 regulations, Richard Alan ensures that Health & Safety is considered paramount and incorporated in all of their design process

Electrical

Richard Alan Engineering can offer BS7671 compliant design and installation services for low voltage systems.

As a NICEIC approved contractor we strive to consistently install safe and high quality installations for every client we work with. We regularly undertake installations in the water treatment, chemical and manufacturing industries

Our in-house electrical design engineers use Trimble Pro-Design software for design calculations and verification

We also have a number of in-house CompEx electricians enabling us to undertake LV Installations and inspections in Hazardous Areas.

NICEIC APPROVED CONTRACTOR

CompEx

Control

Our EC&I Design engineers can produce control panel and MCC designs using Autodesk – AutoCAD Electrical software.

From form 2 duty/standby pump control panels, full plant process BPCS panels and form 4 MCCs Richard Alan Engineering can provide a solution to suit your process needs

Production of control philosophy/FDS is standard for every project we undertake, here we outline exactly how the system operates and tailor the control to suit your specific plant/system requirements

We have extensive experience in Allen Bradley, Siemens, Mitsubishi and Schneider PLC systems including the hardware specification and production of Software.

Our in-house commissioning team ensure our systems are set-up to align with FDS requirements, a fully signed FAT document is handed to the client on completion of every project.

Instrumentation

Our EC&I engineers can specify and install a vast range of instrumentation for various processes. We can design to our own internal standards or follow site specific specifications and preferred manufacturers.

Our in-house installation and commissioning engineers test and calibrate instrumentation to ensure optimum performance and minimum downtime.

EC&I design engineers produce block cable and loop diagrams for all projects as standard.

For Hazardous area installations, instrumentation design is performed by CompEx -Ex-12 Application Design Engineer qualified engineers and DSD calculations are provided for all IS circuits

Trimble

SAFEcontractor APPROVED

INSTALLATION

OWN FLEET

Richard Alan's own fleet of vehicles including HIABS, enable a quick & professional delivery throughout the UK. For larger equipment we use strategic partners with experience on large equipment movement in the UK

PROJECT MANAGERS

Our Project Managers are fully NEBOSH qualified, and offer a professional service ensuring a smooth and hassle free installation regardless of the complexity.

RICHARD ALAN INSTALLATION

COMMISSIONING

On completion of a project installation we can provide complete mechanical and electrical testing and commissioning, providing relevant and appropriate training to ensure efficient and effective handover

INSTALLATION TEAM

Richard Alan's installation teams are experienced as site principals for health and safety, CDM and supervision of sub-contractors, especially on COMAH top tier sites.

Installation

Richard Alan offers a full mechanical & electrical installation service. This can include

- Tanks, Vessels, Silos & other steel equipment
- Pipework & Ducting
- Structural Steelwork
- Electrical wiring, Controls & instrumentations
- Ancillary equipment including valves, pumps, heat exchangers etc

Principal Contractor

Richard Alan are fully qualified to offer the service of **Principal Contractor.** Our job is to manage the construction phase of a project that involves more than one contractor. We are appointed by the client and are responsible for the health and safety of the project.

Responsibilities include;

- Planning
- Health and safety
- Communication
- Compliance
- Welfare
- Training
- Reporting

PROJECTS

“The art and science of co-ordinating people, equipment, materials, money. and schedules to complete a specified project on time and within an approved cost.”

With you every step of the way

FULL TURNKEY ENGINEERING SOLUTION

Richard Alan has a team of fully qualified Project Engineers with extensive experience in managing both large and small projects. They are also experienced in serving as site principals for Health & Safety, CDM, and supervision of subcontractors.

Richard Alan’s services encompass all aspects required to deliver a project, including design, fabrication, delivery, installation, and commissioning, all provided in-house. This approach allows for better control of a project and reduces the need for multiple contractors on a customer’s site.

Richard Alan possesses significant experience in defining the scope, specifications, and implementation of projects across various industries. From initial concepts or production problems to the execution of fully specified projects, Richard Alan is equipped with the skills and experience necessary to help clients achieve a return on their investment.

Richard Alan has been the preferred mechanical & electrical supplier to many of the UK’s largest Blue-chip companies for many years and has honed their skills to ensure all projects meet stringent criteria as set by clients both large and small.

Project Management Steps

Step 1: Project Definition

Intended use by the owner upon completion. Conceptual configurations and components to meet the intended use

Step 2: Project Scope

Define the work that must be accomplished. Identify the quantity, quality, and tasks that must be performed

Step 3: Project Budgeting

Define the owner's permissible budget, determine direct and indirect costs plus contingencies

Step 4: Project Planning

Select and assign project staffing, identify the tasks required to accomplish the work

Step 5: Project Scheduling

Arrange and schedule activities in a logical sequence.
Link the costs and resources to the scheduled activities

Step 6: Project Tracking

Ensure the project is progressing as planned by measuring work, time, and costs that are expended and compare "actual" to "planned" work, time, and cost

Step 7: Project Close Out

Final completion to ensure owner satisfaction. Perform final testing and inspection, archive documents, and confirm payments.

Turn over the project to the owner.

CONSULTANCY

"Transforming Vision into Engineering Excellence"

To support Richard Alan's project work, we established an engineering design consultancy service, operating as a distinct division within Richard Alan Engineering known as ***Tech Team***.

Tech Team employs a team of highly experienced and skilled design and project engineers, encompassing a wide range of disciplines including mechanical, electrical, process, and structural engineering.

The Tech team is typically engaged at the inception of the project process; their mandate is to collaborate closely with the client to develop their concept and subsequently produce a comprehensive design package that considers process efficiency, life cycle, and environmental impacts.

The team is fully qualified to conduct a feasibility study, which is a systematic evaluation of the practicality of a proposed project or plan. This study helps determine if a project is likely to be successful.

MECHANICAL. STRUCTURAL. ELECTRICAL. PROCESS

Feasibility Study & Consultancy

The team are fully qualified to deliver a feasibility study which is a systematic evaluation of the practicality of a proposed project or plan. It helps determine if a project is likely to be successful.

A feasibility study analyses all critical aspects of a proposed project to determine its likelihood of success. Business success is often defined by return on investment, but other factors like community reaction and environmental impact are also important. Feasibility studies help project managers assess risks and returns before proceeding.

One of the key advantages of using Tech Team is their affiliation with the Richard Alan Group. This connection provides them with invaluable insights into the manufacturing and installation requirements of projects, which the team leverages when designing and advising on the best course of action for any project.

This association offers a significant advantage over other design companies that may prioritise design over the practical aspects of manufacturing and project delivery.

Why conduct a feasibility study?

- To determine if a project is viable
- To assess the economic benefits of a project
- To identify problems and opportunities
- To define successful outcomes
- To assess the costs and benefits of different alternatives

What We Do

As an engineering design consultancy business we provide expert advice and guidance on engineering projects. Our project consultants work with clients to develop, refine, and implement designs for engineering projects.

What do we do?

Advise on project feasibility
We help clients decide how to start a project, and create cost plans and budgets

Create project plans
We map out the processes for each task, and assess risks and quality control

Manage projects
We oversee the project from start to finish, liaising with all parties involved

Provide technical expertise
We have specialised knowledge in areas like structural, mechanical, electrical, and environmental engineering

Lead teams
We may lead teams of designers, engineers, construction workers, and others

Our Typical Consultation Design Service Includes

Creation and development of Process Flow Diagrams (PFD's)

Utility Flow Diagrams (UFDs) – To complement the process flow and ensure utility requirements are captured early

Mass and energy calculations

Process simulation & modelling - Where required, to support mass/energy balances, equipment sizing, and sensitivity analysis

Equipment list
- Sizing and equipment selection

P&ID's creation and development
- Material selection
- Pipe specification creation
- Pipe sizing calculations
- Pump sizing and selection
- Process Calculations
- Relief calculations
- Line list creation
- Design conditions

3D Modelling
- Layout creation and reviews
- Vessels and tanks, steelwork and pipework
- GA / Plot plan creation
- Design reviews
- Client or marketing required drawings

Electrical
- I/O List and count
- Electrical diagrams
- Power specification, supply and routing
- Electrical trace heating specification

Control philosophy development
- Functional design specification

Instrumentation sizing and selection

Risk assessments
- Review and assessment off industry standards and regulations such as PUWER, ATEX & DSEAR and more
- Carry out Industry standard HAZOP
- Assess and create Hazardous Area Plot plans

Electrical, Control & Instrumentation Design
- I/O List and count
- Block cable & loop diagrams
- Load Lists
- Functional Design Specifications & Control Philosophies
- MCC, Switchgear & control panel design
- Functional Safety Design in line with IEC 61508 & 61511 lifecycle
- Hazardous Area (Ex / ATEX) design
- Instrumentation specification

Consultancy and Assessment
- Design risk assessments of processes and machinery in line with ISO 1210, PUWER and BS EN 60204-1
- Carry out Industry standard HAZOP & LOPA
- Low Voltage network and plant distribution design & verification
- DSEAR & ATEX Compliance - incorporating (HAC Drawings, Ignition Hazard Assessments, equipment selection/advice)

Carbon Capture Modular Skid

BASF BIO Plant

Tank Farm with Steelwork

Mixing tank line

WATER TREATMENT

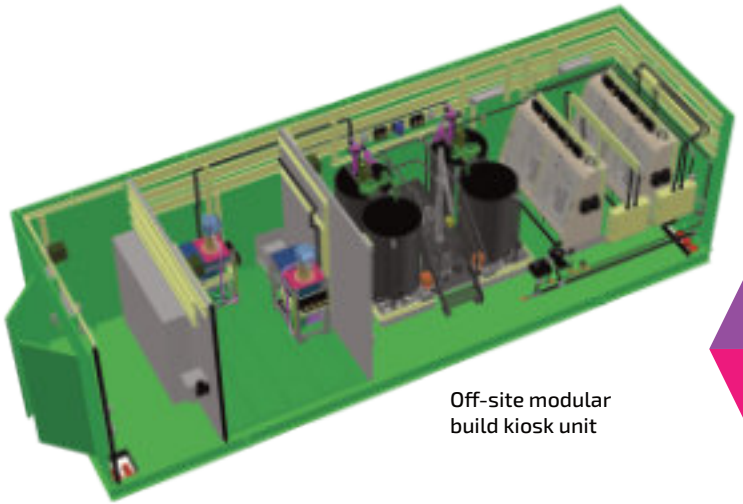
Single source manufacturing supplier of equipment used in water and wastewater treatment

Richard Alan have developed a modular range of equipment for chemical preparation, storage and dosing. With dedicated teams of process engineers and designers, in addition to our fabrication and production capabilities, we can provide full project support – integrating equipment to deliver complete systems to suit any water treatment requirement.

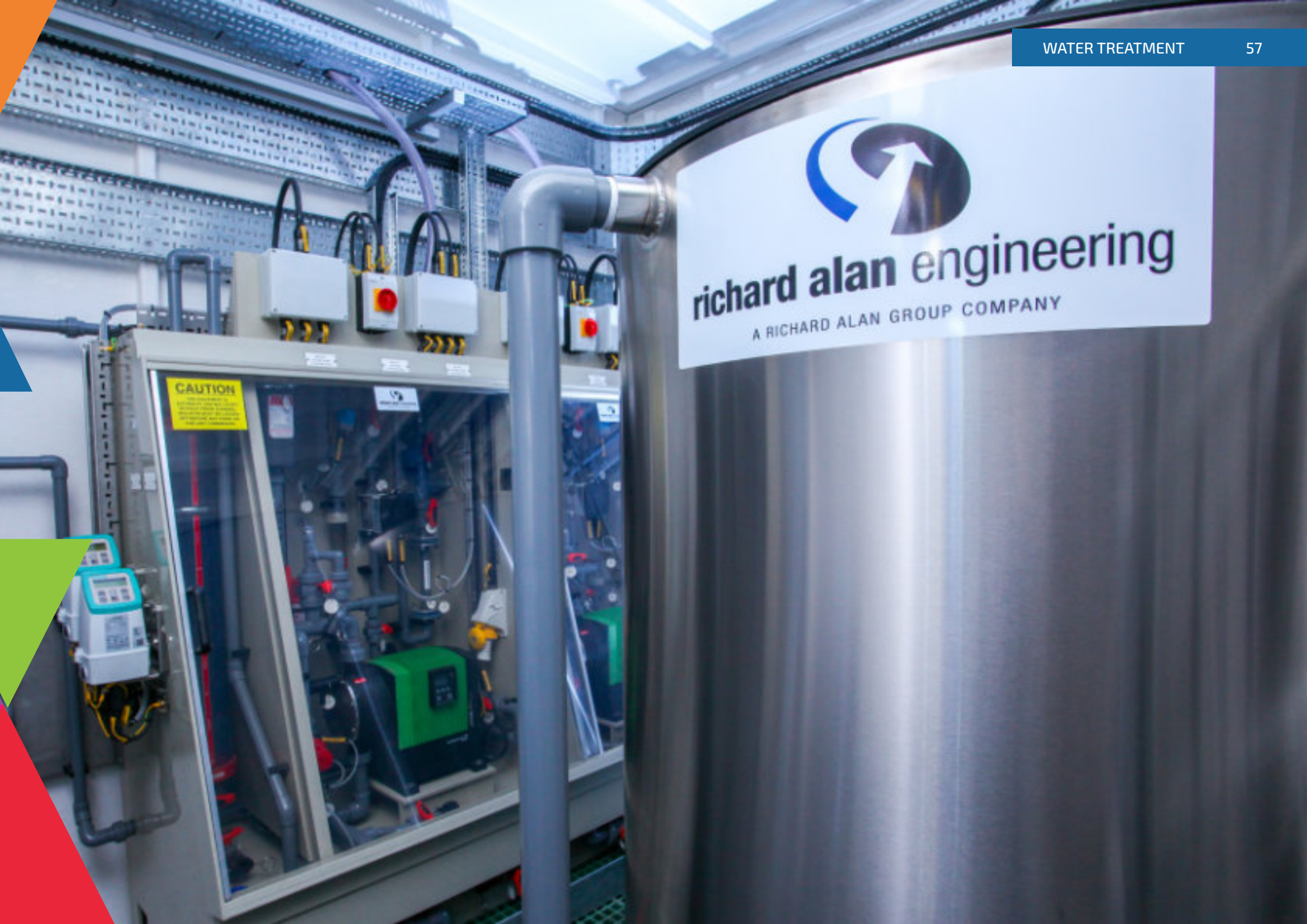
As well as off-the-shelf equipment and systems we can also provide purpose built and bespoke designs, supplied as part of a combined skid arrangement or separate assemblies. Our products are backed by a full after-sales support service, including planned preventative maintenance, operator training and spares.

We design, manufacture & install a high-quality range of Dfma (off-site build) Kiosks. These kiosks house a range of storage and preparation equipment for the dosing of polymer and chemical applications, including Polymer (liquid & powder), liquid coagulants, acids etc and other powder products like soda ash & lime for the treatment of municipal water, wastewater and industrial effluent. Housed within a security rated kiosk, our kiosks are stipulated on the Severn Trent Standard Product Hub, meaning they have been thoroughly tested and meet all stringent quality standards expected within the water treatment industry.

Tested, commissioned and shipped complete, dramatically reducing site installation and contractor interfaces on site.



Off-site modular build kiosk unit


CAUTION
richard alan engineering
A RICHARD ALAN GROUP COMPANY






Our equipment utilises patented wetting technologies which ensure optimum performance throughout the dosing process. As part of our service, we can offer temporary rental units for powder and liquid polymer systems.

Handling, mixing and storage
We offer handling, mixing and storage from 50kg hoppers to 50 tonne silos and above, plus tank packages ranging from 0.3m^3 to in excess of 35m^3, manufactured to specific design codes or custom-made.

Silos - available in a variety of materials including carbon steel and stainless steel and painted to customer specification. Manufactured with steelwork support frames or with skirted bases complete with a steel access door for maximum security, including lighting and heating.

Mixing and storage tanks - available in a variety of materials including mild steel, stainless steel, duplex and plastic in any horizontal, vertical, and sectional arrangement.

Our systems and equipment, whether standard design or purpose-built, can accommodate a range of dry and liquid chemicals. Equipment can be tailored to achieve specific throughputs to fulfill requirements of application.

Systems are designed and configured to suit available on-site footprint and environment, in conjunction with product types and capacities

In addition, we offer various options for materials handling such as vacuum transfer units for hopper filling or lifting frames with integrated hoist and safety table for FIBC ('big bags'). Such options eliminate manual handling operations and dust contamination to the environment, commissioned and shipped complete, dramatically reducing site installation and contractor interfaces on site.

We work with the following pipework materials

ABS, UPVC, Polypropylene, PBDF, Stainless 316 & 304, Carbon, HDPE

Polymer Handling

We are specialists in the design, manufacture and installation of liquid and dry polymer make-up, storage and dosing systems. Such systems are used in both clean water and waste water applications.

Our equipment utilises patented wetting technologies which ensure optimum performance throughout the dosing process. As part of our service, we can offer temporary rental units for powder and liquid polymer systems, for example, to ensure continuous plant operation during installation of new equipment or to handle increased polymer demand.

AeroWet - Dry polymer is fed from the hopper by a calibrated screw into a stream of air where it is pneumatically conveyed to a JetWet® wetting head prior to entering the mixing tank. The polymer solution is agitated before being batch transferred to a storage tank.

EMU (Emulsion Make-up Unit) - Neat liquid product is pumped with a variable speed digital diaphragm pump into a flash mixing tank where water is introduced to dilute the neat polymer down to the required make up strength. The diluted polymer weirs over into the stock tank to be drawn off and dosed into the process via dosing pumps

Benefits of AeroWet polymer dosing systems

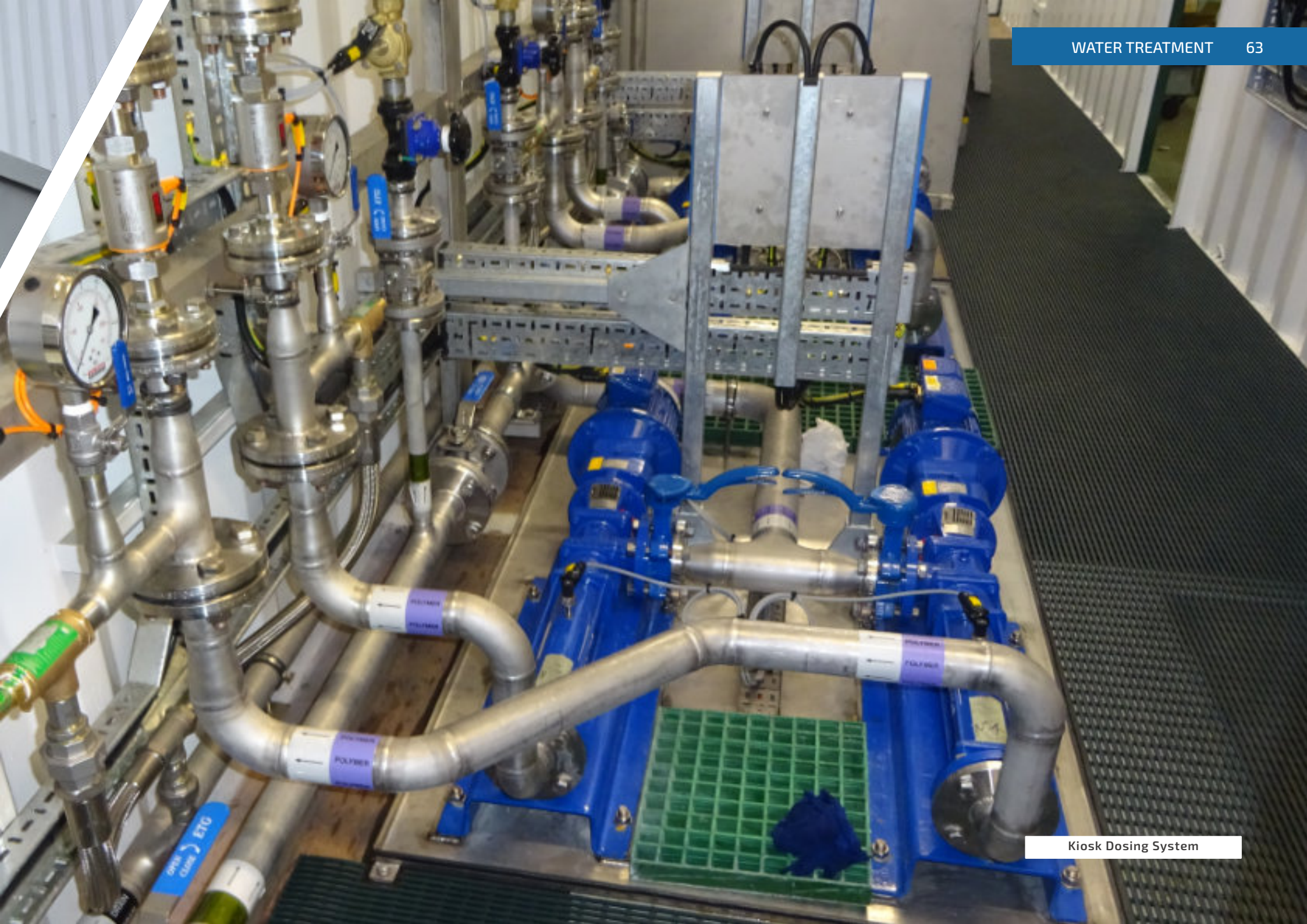
- Offers superior process quality with consistent, repeatable and lump free polymer solutions
- Minimal operator involvement
- Wired and tested prior to delivery - minimum installation and commissioning required

Dosing Systems for

- **Ferric Sulphate**
- **Ferric Chloride**
- **Sodium Bisulphates**
- **Sodium Hypochlorite**
- **Sodium Hydroxide**
- **Sodium Carbonate**
- **Lime**
- **Anti Foam**
- **Sulphuric Acid**
- **Orthophosporic Acid**

EMU

Poly Dosing Kiosk



Kiosk Dosing System

Dosing Kiosk Internal

Silo Polymer Dosing

richard alan

Consultation
Design
Fabrication
Installation
Projects

GET IN TOUCH

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