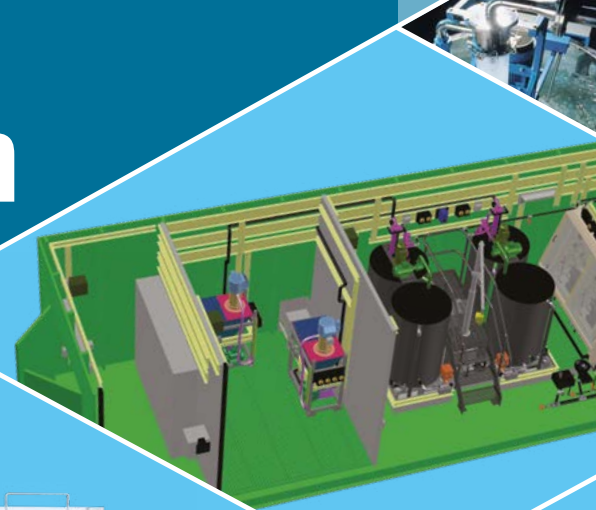




richard alan



**Chemical Preparation,
Storage & Dosing
Equipment**





A 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.

Schemes can be housed within security rated kiosks if the application requires, with mechanical, electrical and instrumentation installation. Tested, commissioned and shipped complete, dramatically reducing site installation and contractor interfaces on site.

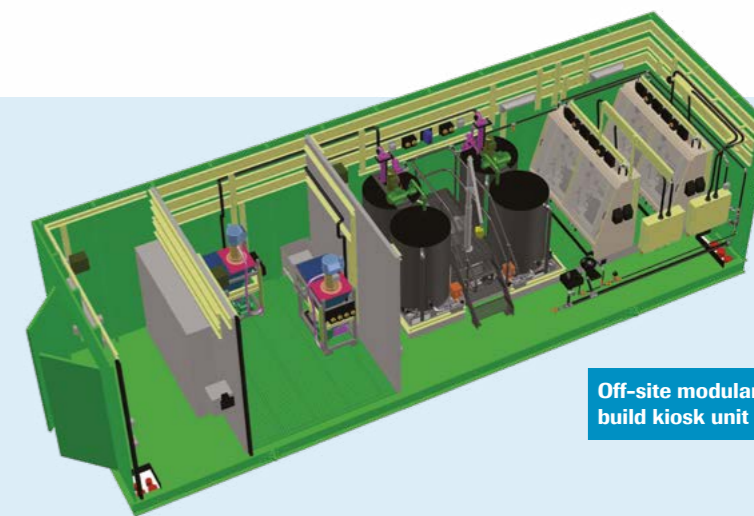
Depending on the nature of your water treatment application, we can also design, supply and install:

- **mixing and storage tanks/silos**
- **steelwork**
- **access platforms**
- **process pipework**

Our portfolio covers a variety of industries; regional and national utilities, paper and pulp, mining, quarrying, industrial process, food, beverage and chemical plants.

Benefits delivered by Richard Alan

- **Project management from experienced supplier**
- **Provision of integrated services ensures greater collaboration**
- **Systems can be tailored to your requirements**
- **Testing and commissioning of units can be completed prior to delivery. On-site installation time and safety risk is significantly reduced**



Off-site modular build kiosk unit

Your chemical dosing requirements

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 fulfil 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.

LIQUID chemicals

- **Emulsion Polymers**
- **Emulsion Bentonite**
- **Sodium Hypochlorite**
- **Acids & Alkalis**
i.e.. Sulphuric, Hydrochloric, Caustic Soda, Sodium Bisulphite

DRY chemicals

- **Polymer**
- **Bentonite**
- **Lime**
- **Potassium Permanganate**
- **Activated Carbon**
- **Inorganic Coagulants**
i.e.. Ferric Sulphate/ Chloride, Aluminium Sulphate



Bentonite make-up system

Bespoke **dosing and pump** skid units for **Bentonite** system



Dual **hopper** arrangement contained within **product silo**



Delivery of **silos** to site



Installation of **chemical tank and dosing pumps** for **Stabilised Lime** system



Silo, mixing and storage tanks for **Polymer** system

Handling, mixing and storage

We offer handling, mixing and storage from 50kg hoppers to 50 tonne silos and above, plus tank packages ranging from 0.3m³ to in excess of 35m³, 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.

Specialist polymer handling technologies

We are specialised 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 diaphragm pump or progressive cavity pump, to a centrifugal mixing pump. It is activated with water before transferring into an ageing/storage tank to be dosed into the process.



Typical **EMU** CTS (Compact Tank System) unit



Dry polymer dosing pump cabinet

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

We look at a client's complete requirement and build a system around it, for example:

PRODUCT HANDLING	REQUIREMENT
1 Tonne Bags	Big Bag Frame /1000kg Hoist IBC lifting Tower
25kg Bags	Vacuum Loader
Bulk Storage	Silos 6m ³ to 250m ³

PRODUCT PREPARATION	REQUIREMENT
Dry Powder up to 1.2kg / m	AeroWet 100 or 200
Dry Powder up to 6.0 kg / m	AeroWet 100 HC± or 200 HC±
Liquid Chemical up to 70 l / hr	EMU (FLX - Flexible modular design)

± HC = High Capacity

PRODUCT MIXING & STORAGE	REQUIREMENT
300 litre batching / storage	AeroWet 100 + 0.3m³ INT*
1000 litre batching / storage	AeroWet 100 + 1.0m³ INT*
2200 litre batching / storage	AeroWet 100 + 2.2m³ INT*
3000 litre batching / storage	AeroWet 100 + 3.0m³ INT*
4000 - 30000 litre capacity	4m ³ - 30m ³ IMS (Integral Mixing & Storage Tanks)

*INT = Integral tank/s

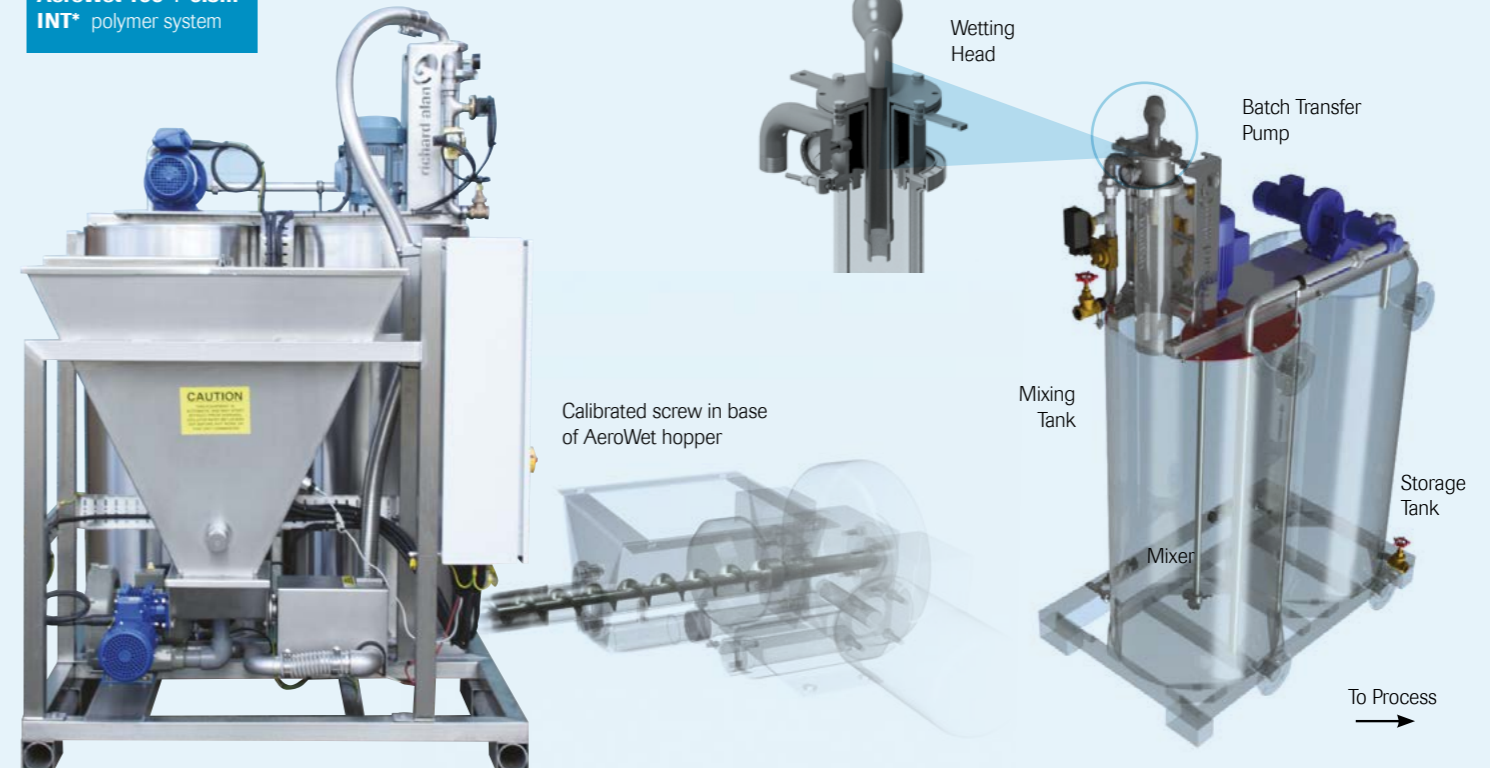
DOSING

To specification, we can supply a range of dosing skids utilising **digital** or **progressive** cavity pumps from reputable manufacturers, including the client's preferred choice.



Dry polymer make-up, storage and dosing system

AeroWet 100 + 0.3m³ INT* polymer system



Our expertise lies in major fabrication and installation, encompassing highly skilled design, manufacture and comprehensive maintenance services.

This core business is extended through our range of engineered **equipment for water and wastewater treatment**. We can provide complete systems for dry and liquid chemical preparation, storage and dosing. Handling every step of the process demonstrates our capabilities as a single-source supplier, serving both municipal and industrial sectors.

Integral to our core business are our skills in: **heavy fabrication, sheet metalwork, structural steelwork, process pipework and mechanical, electrical, instrumentation and control.**

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, reduces disruption to site operations and offers benefits in terms of costs and time scales.

At Richard Alan our mission is to deliver innovative engineering products and services when and where they're needed.

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