

# A New Concept in Air Mixing

Plus many more applications.



## Introducing Modular Air Mixing Systems

**Clayton Penistone Group**

Traditional Air Mixing System using Modern Design Technology linked  
with Efficient Manufacturing & Maintenance Techniques.



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**modular mix**

# Introducing The Clayton “Modular Mix” Sludge Mixing Unit

Having been involved with every stage of sludge tank air mixing systems for over eight years, we are pleased to offer our new generation of factory assembled mixer units called the “Modular Mix”. The innovated design cuts down on site time whilst ensuring each unit is fully tested before delivery to site. We design, manufacture, assemble, install, cable, commission and maintain, using our own fully qualified and accredited staff.



The “Modular Mix” has all the features of the normal air mixing systems but is built on a single frame in the workshop. The integrated frame houses the compressor, the acoustic housing the VSD, PLC, Controller and Manifold all of which are pre assembled, piped, cabled and tested in the workshop before delivery to site.

The frame is fully hot dipped galvanised and is designed for crane lifting or fork lift truck handling. It is also intelligently designed for easy maintenance so all parts can be serviced and replaced on site quickly and simply and at floor level. Ideally the unit should be sited onto a pre-prepared concrete plinth, but the unit can be sited on any level secure ground.

Site installation time is halved by using the “Modular Mix” unit thus requiring tank down time to be halved too. Site installation is limited to the tank pipe work installation and connection to the power supply and remote control/indication cable (if required) so.

Each “Modular Mix” unit follows a standard design matrix therefore offering standardisation of parts thus minimising spares stock holding. The compressor/blower is designed with 20% spare capacity with the high efficiency motor controlled by a variable speed drive to maximise power efficiency. The controller is of standard design regardless of compressor/blower size with only the Variable Speed Drive, etc changing with motor size.

The “Modular Mix” unit is ready to offer a solution to most sludge tank mixing requirements, it can cope with a dry solids content of up to 8% and can even be switched to intelligent mode so that the VSD will respond to tank levels by regulating/varying the motor speed and so saving power. For more information on the Clayton “Modular Mix” unit please contact our sales team who will arrange for a free engineering assessment site visit followed by a fixed price tender for the full installation. We can even offer you a whole life maintenance package where for a fixed annual fee our engineers will service the unit and, in the unlikely event of a failure, respond and repair. All service parts being fully covered you only pay for none service items.



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# Specifications and Technical

**“Modular Mix” Design:** All designs are completed in-house by our Electrical and Mechanical design team supported by the latest CAD design packages. Each scheme is treated as unique and undergoes a full evaluation to ensure the “Modular Mix” unit selected is correctly sized for each application.

**Tanks Types:** “Modular Mix” can cope with round or square tanks which are low or tall.

**Tank Sizes:** “Modular Mix” will mix in tanks from 50 cubic metre to 5000 cubic metre.

**Power:** “Modular Mix” Power consumption will vary with tank profile and volume from 4kw to 90kw but with the energy saving VSD unit onboard efficient power use is maintained.

**Air Supply:** “Modular Mix” normally uses its own compressor but can use any air delivery method including customers own air site supply.

**Controls:** “Modular Mix” Control Panels are built in house to customers own specification.

**Control Logic:** “Modular Mix” basic controls include VSD, PLC, Level, Timers, with self cleaning.

**Dry Solids Content:** “Modular Mix” can cope with dry solids content of up to 8%.

**Noise:** “Modular Mix” compressor acoustic shelters to minimise noise to below 75dB

**Materials:** “Modular Mix” components are all of high quality and designed for long life, ease of maintenance and efficiency. However, where Clients have Frameworks we will be pleased to source from them.

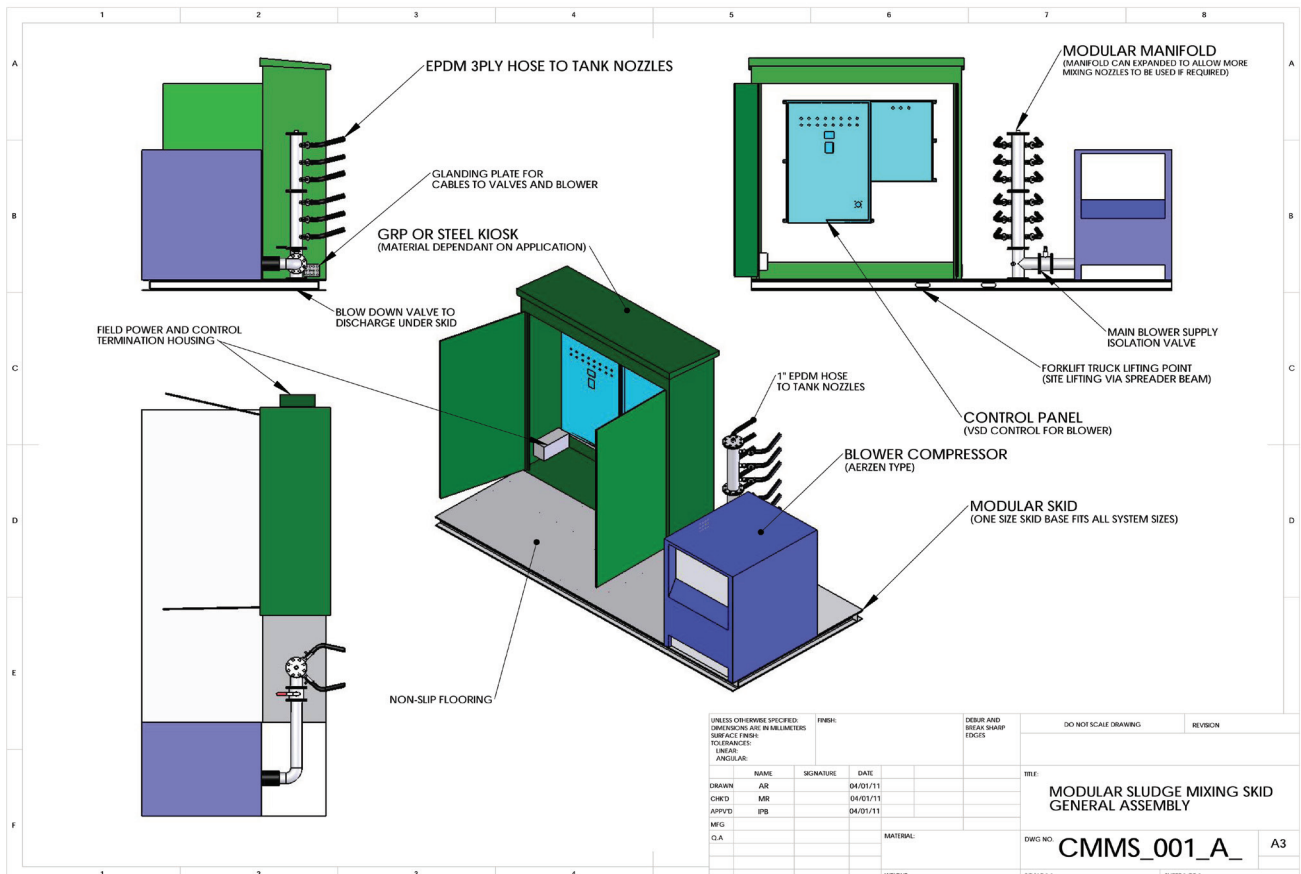
# Tendering Process

We offer a free site evaluation and quotation service for every project thus ensuring that the equipment we offer is correct for the duty. Once you have identified a need for fast efficient mixing please call us and we will arrange a site Mechanical and Electrical survey. Following the site survey we will then meet with you to determine your mixing requirements and to discuss and consider how the equipment is to interphase with your control logic.

This ensures that the “Modular Mix” unit provides full integrations first time. All installation are completed under our ISO9001 Quality Plan by

our own engineers who carry CSCS cards and are Confined Space Trained as a minimum. All electrical work carried out is fully NICEIC certified on completion.

We also offer a full maintenance service including out of hours call out support and technical support plus sludge sampling. For the full scope of our services please see our main brochure or visit our web site at [www.ccpl.biz](http://www.ccpl.biz)



# Clayton “Modular Mix” Whole Life Investment

## “Modular Mix” Quality by Design

We consider the whole life costs at the concept stage, by ensuring that the design, installation & commissioning ensures a long life with minimum maintenance and efficient running costs. To achieve this we have four definite design, process and installation steps.

### Stage One - Pre Design

Existing Tanks (Site Survey)

We attend site to look at the shape/size of the tank(s), we determine the required mix regime, discuss the control philosophy, look at the existing control protocol and at the interphase requirements. We also consider the power supply source, where the modular mix unit will be sited and the installation requirements and methods.

### New Tanks (Site Survey)

Prior to the site visit we would look at the full specification and where necessary discuss the equipment with the tank suppliers/manufacturers. We then attend site to look at the location for the new tank(s), we determine the required mix regime, discuss the control philosophy, look at the existing control protocol and at the interphase requirements. We also consider the power supply source, where the modular mix unit will be sited and the installation requirements.

### Stage Two - Design

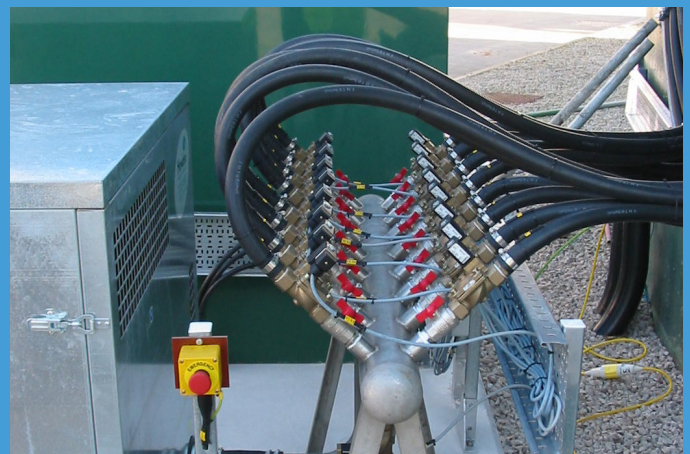
Throughout the design stage we ensure that all equipment selected is adequately sized not only to meet the known criteria but has at least a 20% reserve. However, the on board intelligent PLC and the VSD ensure efficient power use at all times. We also ensure that the equipment is simple and easy to maintain and is totally reliable in use.

### Stage Three - Installation & Commissioning

All work is undertaken by our own engineers working to the highest standards using high quality materials. We only use stainless steel fixings inside the tank to ensure long life. The whole installation will be completed swiftly to minimise downtime and be fully supported by site specific RAMS.

### Stage Four - Maintenance

We offer a full on-site warranty for the first year following installation. Thereafter we can offer a full 24/7 call out and maintenance service including a fixed yearly maintenance contract covering all parts and labour.



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