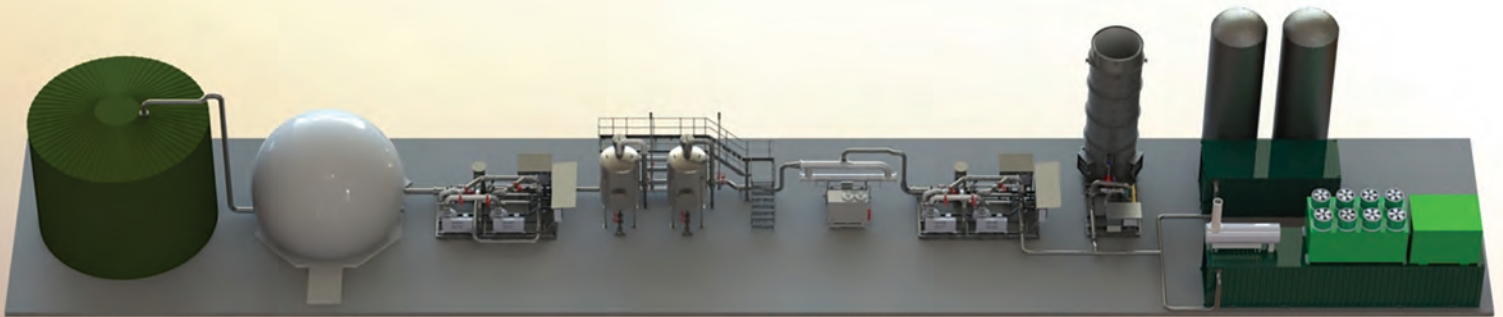


UNIFLARE™

GROUP

GLOBAL ENVIRONMENTAL TECHNOLOGY



DESIGN | MANUFACTURE | MAINTAIN

Unit 19 | Runway Farm Technical Park | Honiley Road
Kenilworth | Warwickshire | CV8 1NQ | UK

Tel: +44 (0)8714 111 114 | Fax: +44 (0)1676 529 119 | enquiries@uniflare.co.uk

www.uniflare.co.uk

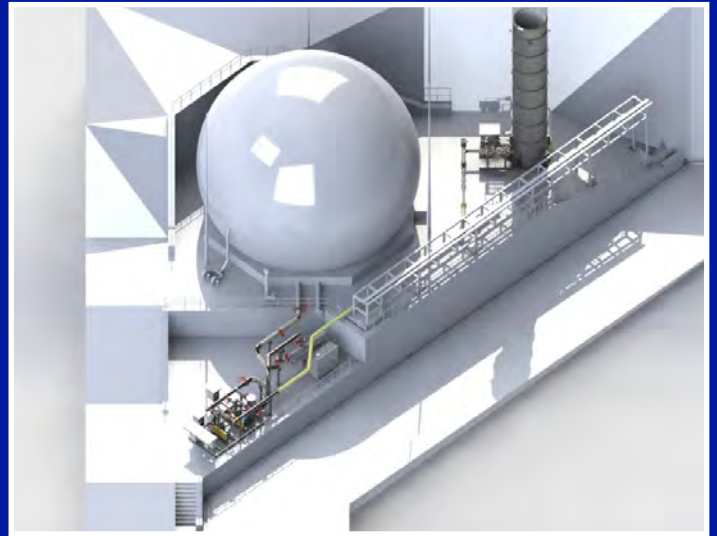
DESIGN | MANUFACTURE | MAINTAIN

Uniflare have a fully resourced in house design department which has over 40 years combined industry knowledge. We have the expertise and in house skill to not only produce our standard range of products but work on bespoke projects where more in depth design and knowledge is required to achieve the project goals.

The Uniflare design team have now designed many AD Plant Gas Train Systems where using the wealth of knowledge and skill have designed the complete system from the digester outlet through to the CHP inlet and Waste Gas Burner/Flare Stack

Uniflare design engineer's use the latest design technology and software in 3D Solid works. This allows us to produce 3D models of all our equipment and site models so can see in details and plan the complete works to ensure it both complies with legislation and a seamless system where other components outside of the Uniflare scope may impact on the site.

All the design team are also trained on all aspects of ATEX and DSEAR and ensure that the equipment we manufacture always fully complies with the appropriate directives and CE



Uniflare manufacturers have 40 years' experience in building quality robust landfill, waste gas and other bespoke gas process equipment and can modify existing plant and upgrade to new legislation requirements and standards such as ATEX and DSEAR.

Uniflare manufactures all its products in house at its purpose built factory in Kenilworth, Warwickshire. All equipment is designed and manufactured in accordance with the companies stringent quality and ISO policies with all fabrication works carried out by fully trained and coded fabricators and welders.

Uniflare also designs and manufactures bespoke and standard control systems at its dedicated controls centre, this houses fully qualified personnel who are fully experienced with all aspects of control and PLC design and software such as Siemens, Allen Bradley and Telemechanique.

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The engineers and other personnel at Uniflare have collectively a wealth of various skills and experience; all our engineers have a very good knowledge of landfill gas flares that have been built up over a number of years and all have recognised certificates of achievement for electrical and mechanical works.

The Uniflare Service Engineers carry a comprehensive stock of spare parts on the service vehicles; all the vehicles are fully equipped with tools and testing equipment. In the event that a particular spare part being required that is not on the service vehicle then it will be sourced and ordered through our purchasing department the same day and then shipped straight to site or to our works for replacement on the next visit.

The works will be carried out by trained Uniflare personal with none of the service and maintenance works being sub-contracted out.

We provide tailored Operation and Maintenance packages to best suit each of our clients and offer full system reports, audits and overhaul and upgrading of all types of landfill gas flaring and pumping equipment.

Uniflare offer 24 Hour Technical Help Line and are available 365 days a year.



PRODUCTS



SITE PIPEWORK



CONTROL PANEL



GAS BOOSTER SETS



DEHUMIDIFIERS



GAS CLEAN UP PACKAGES



FLARE STACKS

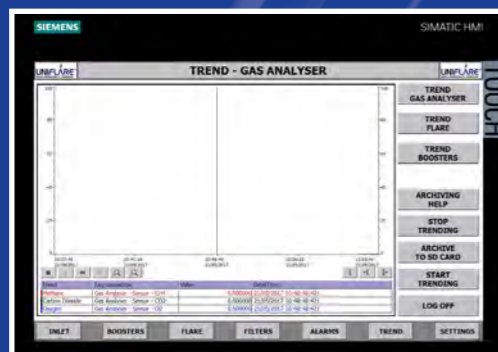
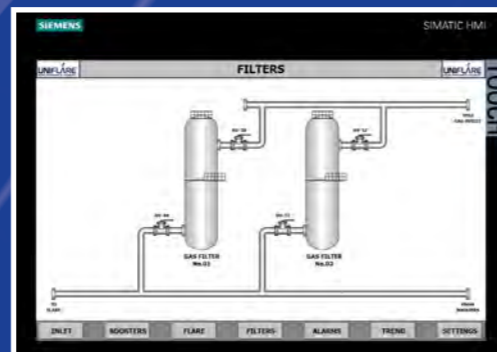
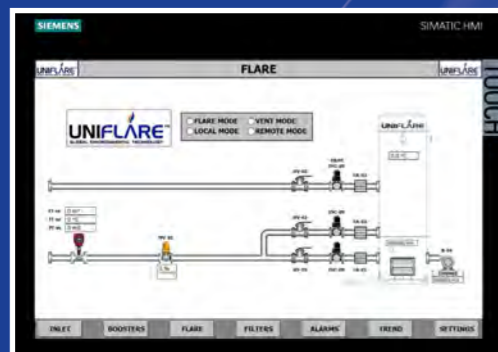
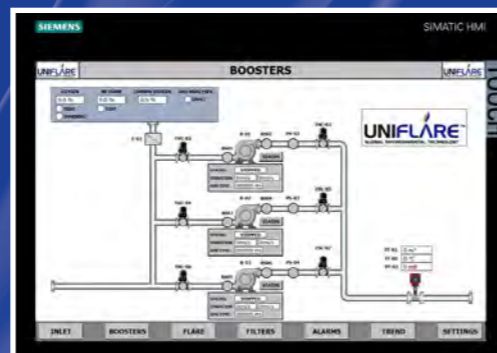
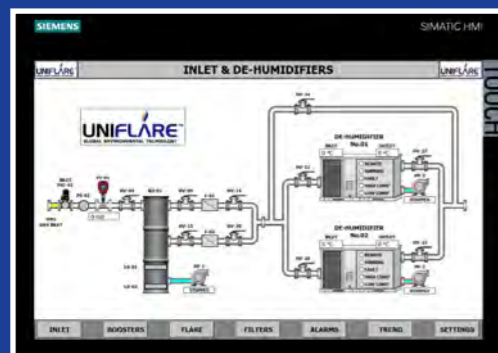
CONTROLS

Uniflare offer a wide range of control panels, from single equipment to full gas train package control systems.

We have a fully operational controls factory at our Kenilworth location where the complete build, programming & wiring of each panel is carried out.



Uniflare have continued to develop new and easier ways for our customers to remotely access their equipment, this improves the operability of the equipment and allows Uniflare to also log on and help assess any issues with plant. This is proving extremely affective and has a huge positive impact on sites, especially sites that are not easily accessible.



FULL TURNKEY PACKAGE SOLUTIONS

- Biogas & Biomethane Flares Stacks
- Low Calorific Flare Stacks
- Booster Sets
- Dehumidifier Plants
- Gas Clean Up Technologies Biological & Carbon
- Control and Automation Panels
- SCADA systems
- Gas Train Master Control Systems
- O2 Dosing
- Gas Analysis & Reporting
- All Forms of Process Pipework
- Coded Welding
- Filtration & Dewatering
- Fully Compliant Electrical Installation
- Biogas Boilers
- Equipment Packaging
- Hire of equipment; Flares, Boosters, Chillers & Clean Up
- Refurbishment & Upgrading of Existing Equipment
- Site Optimisation
- Pumping Trails
- Service & Maintenance
- Parker Biogas Products, Including SRS Technologies



98% Oxygen Dosing system to Reduce H₂S in Gas to Grid Applications

Redesigned for the Gas to Grid Market our micro-biological desulphurisation system is helping to cut maintenance costs and downtime in the Gas To Grid industry. As part of the overall Uniflare gas train package, the desulphurisation system is supplied with its own Oxygen Generator and uses a combination of PID and Fuzzy Logic control to automate the injection of small quantities of Oxygen into the gas stream within the digester. The oxygen converts the Hydrogen Sulphide (H₂S) to elemental sulphur and water, a process which is completely automatic and does not require any operator input and so eliminates additional operational and maintenance costs. The Oxygen dosing system has achieved a 90% reduction in H₂S on one installation with minimal capex spend and very little ongoing operational costs.

The H₂S concentration in the biogas produced from Anaerobic Digestion (AD) can be up to 2,000 to 3,000ppm and is well over the particular specification for gas upgraders currently on the market. The H₂S causes the upgraded gas to be rejected; it also breaks down to produce a weak sulphuric acid that can cause a number of issues. This can lead to increased maintenance costs and downtime.

As an Alternative to full Desulphurisation plants one of the most common ways of reducing the H₂S concentration is to inject Iron Chloride (Ferric Dosing) into the digester slurry / feed substrate which converts the H₂S to Iron Sulphide particles. This requires additional process control functions with dedicated pumps and storage vessels, and the associated on-going operational costs particularly in the supply of Ferric.

An AD technician operating the plant says: "We need to protect our plant operations, maintaining H₂S concentration levels to less than 200ppm is an essential part of this process. "The Uniflare system will enable us to achieve levels of less than 100ppm and at minimal operational cost". This Oxygen for Gas to Grid applications and Air for CHP processes is can be retrofitted to operating plants to bring the efficiencies described above.



Gas to Grid Project

Uniflare Limited was selected as one of the key suppliers to assist in a gas-to-grid plant, the biggest of its kind in the UK. The site was able to convert 1200 cubic metres of biogas an hour into 750 cubic metres of Biomethane which is injected into the National Gas Grid. It was successfully brought online in September 2014 and is now fully operational.

The site in Sutton Coldfield near Birmingham has 16 anaerobic digesters, producing about 3400 cubic metres of biogas from its treatment processes. Previously, this has been used to generate electricity and heat for use in the sewage treatment process, with excesses exported to the national electricity grid. However, the gas-to-grid project means that for the first time it can be used to supply homes with gas.

Uniflare was tasked with the design and supply of the pre-treatment of the Biogas. This included a live gas main connection, allowing power generation to be maintained at the site. The "Hot Tapping" connected directly onto the live HDPE biogas lines feeding the power generation. Both Biogas lines were connected successfully without the CHP noticing any change to their supply.

Prior to delivery into the Gas Upgrader, Uniflare were tasked with pressurising the Biogas, drying it and removing the Hydrogen Sulphide. Working closely with sites operational staff we designed carbon plants specific to the disposal capabilities at the site.

It was also necessary for Uniflare to finely polish the Biomethane post "clean up" prior to it entering the National grid. This required the installation of a further High Pressure carbon plant and particulate filter. All designed and fabricated to meet stringent pressure regulations at our Kenilworth Factory. So successful was our equipment, we were awarded the full mechanical install package in addition to meet the project deadlines.



MAINTENANCE

Uniflare are the service providers for the majority of sites across the UK and have expanded overseas in the recent years. We have an unrivalled knowledge following our years of experience and we pride ourselves on the service level we provide. Whilst developing our customer base and obtaining new contracts on a weekly basis Uniflare will always continue to ensure the highest level is provided to both existing and new customers.

All Maintenance work is carried out by trained Uniflare personal with none of the service and maintenance works being sub-contracted out. Included within the contracts our customers receive;

Tailored Operation and Maintenance packages

24 Hour Technical Help Line

Service Email and phone support Remote monitoring

Remote Start stopping of equipment

Uniflare have a team of fully qualified service engineers and support staff who are experienced in the maintenance and repair of all makes of landfill gas pumping and flaring equipment 24 hour 365 day call out.



The engineers and support personnel at Uniflare have a collective wealth of skills and experience; all our engineers have an extensive knowledge of landfill gas flares that have been built up over a number of years and all have recognised certificates of achievement for electrical and mechanical works. The Engineers continue to development their experience with new courses being attended and completed on a regular basis to ensure we are update to date on all current regulations required.

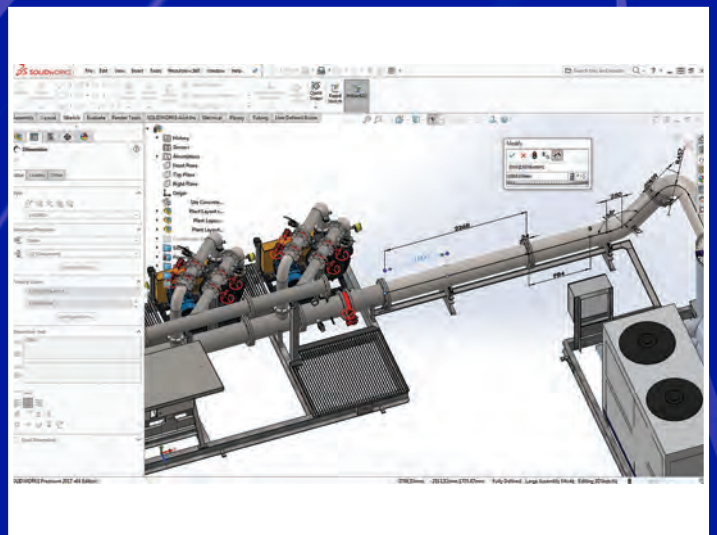
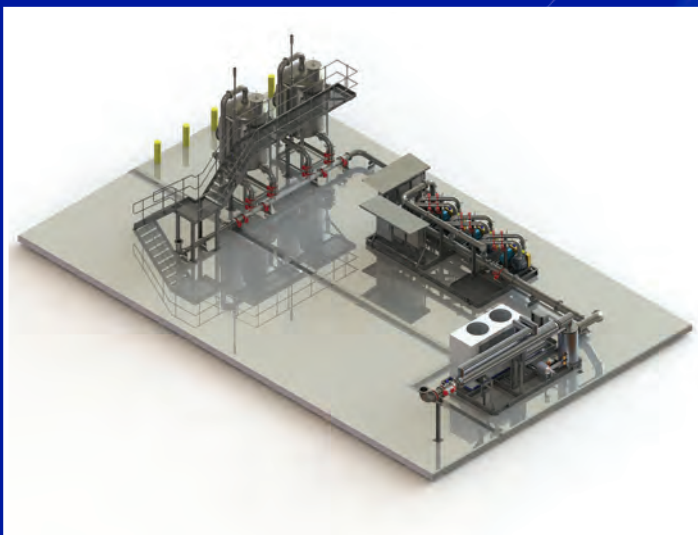
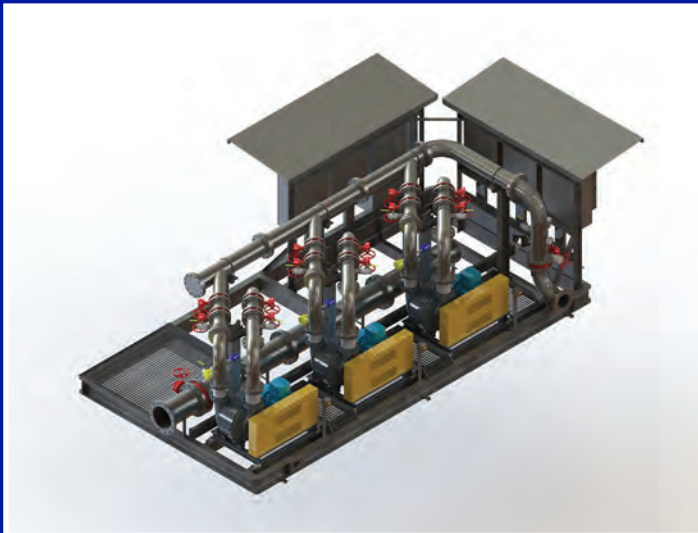
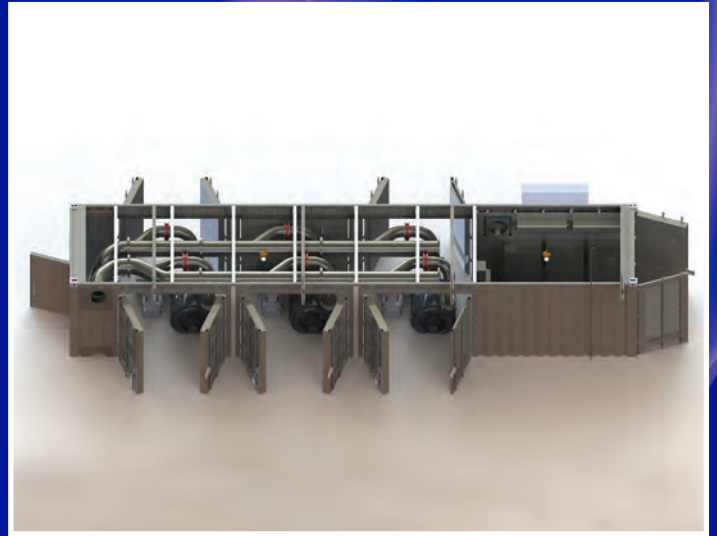
We hold accreditations in key recognised areas to assist our customers in there compliance, we also have dedicated health and safety personnel qualified in **NEBOSH** and other key skills.

Uniflare are **GAS SAFE** accredited and **COMPLEX** trained. Each engineer carries a **CSCS** card and has a range of electrical qualifications to JIB level.

All of this shows that we take service needs seriously.

Having a Service agreement with Uniflare offers a significant advantage. A termed service agreement offers our customers performance guarantees, allows us to partition stock exclusively, allocate specific resources and offer emergency response.

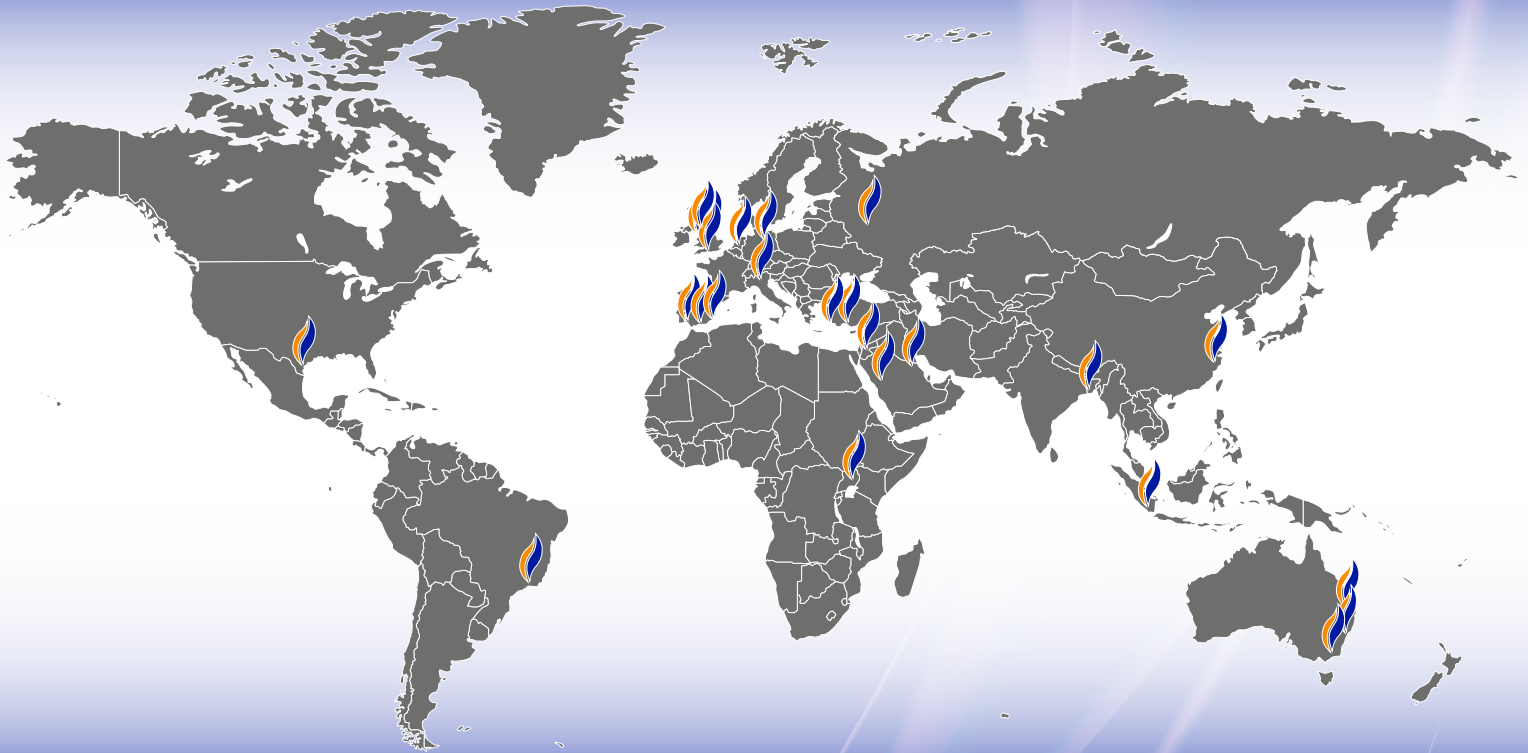
DESIGN







WORLD WIDE ACTIVITY



UNIFLARE WORLDWIDE AGENTS IN

Ireland
Australasia
Australia
Greece
Cyprus
Spain
Canary Islands
Lithuania
Latvia
Estonia
Belarus

Russia
Brazil
Angola
Dallas
Oklahoma
Turkey
Chile
Argentina
Perú
Bolivia
Ecuador