

Nova-Q: AquaClean™ products

A newcomer to the World AD Expo was Nova-Q, the Irish Agri-Biotech company who, along with the Hydrus Group caught the eye with the latest innovations in bio-hydrolysis and dewatering technologies.

Nova Q leads the distribution of AquaClean™ products in the EU, each a broad range of naturally occurring bacteria species which, when applied through specially designed AD Activator systems, deliver a highly concentrated and diverse mix of bacteria and enzymes to significantly improve bio-hydrolysis, the rate-limiting step in anaerobic digestion. New application techniques target



enzyme activity towards specific waste such as lignin-cellulose, fats and oils to get the most out of the process.

When applied directly to land after digestate fertiliser, AquaClean™ products have also proven effective at unlocking the nutrients and

improving their availability to crops. Field studies published at the AD World Expo demonstrated significant yield increases in maize crops when compared to crops where only the digestate was applied. These results demonstrated an extra 3.7MWh per acre over the 134-acre trial area.

With regards dewatering the latest screw press innovation allows operators to easily keep phosphorus in the solid fraction, a key demand for farmers in nutrient-restricted areas.

Contact
T 00353 12542276
www.nova-q.com

Linton and Robinson Environmental AD plants to be off grid

Linton and Robinson Environmental Ltd have developed a solution to enable small scale AD plants to be completely 'off grid', meaning that the plant is totally independent from the national grid to operate. Therefore small scale AD plants can be situated in remote locations that have no grid connection available, have a single-phase connection but seek three phase supply, a weak grid, no grid export permission such as parts of the Scottish Highlands or other locations on the fringe of the electricity network and third world countries.

The 'Off Grid Solution' enables farms to diversify and provide other income streams therefore providing farm sustainability that might not otherwise be achievable.

- No grid connection needed
- Works on either Single or Three Phase Electric
- Independent Electric and Heat Supply
- Suitable for Remote Areas without Grid Supply



- Three phase supply integrated on single phase farm
- No time wasting waiting on the electric grid upgrade or export offer.

T +44 (0)28 7173 0277
info@lintonandrobinson.co.uk
www.lintonandrobinson.co.uk

Meeting global challenges locally

By Matt Hale, International Sales and Marketing Director, HRS Heat Exchangers



This year's UK AD & Biogas and World Biogas Expo showed how the UK is now leading development of the global anaerobic digestion (AD) industry.

HRS have been regular exhibitors since 2014, and this year was definitely the most globally-focused event so far. We spoke to attendees from many European countries, but also from as far afield as South America. As a global company this presented



us with a chance to explain how we can make AD plants more efficient and more sustainable with our Digestate Concentration System (DCS) and Digestate Pasteurisation System (DPS).

We were founder members of the World Biogas Association, which co-organised this year's event with the Anaerobic Digestion and Bioresources Association (ADBA), and so we share that organisation's vision of a sustainable, global AD

industry which actively delivers the United Nations' Sustainable Development Goals.

When confronted with such high level international targets it is all too easy to feel overwhelmed by the scale of the challenge that faces us, but talking to visitors from different countries and different backgrounds at the event underlined that such global goals are ultimately met by local action. HRS Heat Exchangers are committed to helping AD projects thrive around the world, and we welcome any opportunity to discuss this further with potential clients.

T +44 (0)1923 232335
info@uk.hrs-he.com
www.hrs-heatexchangers.com

The Turbo Separator separates waste from its packaging

The Atritor Turbo Separator de-packaging system has been the AD industry workhorse for recovering packaged food content for waste-to-energy applications for over a decade. Its design, durability and strength combine to give a one-step process to remove valuable organic food waste from its packaging with up to 99% efficiency for bio-methane production.

Clean organics are achieved by opening the packaging and removing the contents inside the separation chamber using physical force and air currents, avoiding shredding or damaging the packaging any more than necessary so that no further separation is needed. This helps keep plastics out of the tanks clean and plastics clear of fraction. The efficiency of the separation means that further processing to clean the organics, such as pressing or squeezing is not required, which reduces energy consumption.

The Turbo Separator can operate as a stand-alone wet or dry system; water or other liquid can be added during or after the separation process as required.



T +44 (0)24 7666 2266
mhulme@atritor.com
www.turboseparator.co.uk

BIOGEST Biogas



BIOGEST is a European biogas plant manufacturer with its headquarters in Austria and subsidiaries in the UK, Italy, Romania, Serbia, the Czech Republic, France and the US. With a staff of around 50 employees, we have already installed over 140 biogas plants generating electricity or biomethane. Our reference plants are located in many European countries, and the global market is served by licenced partners.

Our biogas engineering operations extend along the

entire biogas value chain, from project development to planning, financing, turnkey construction and operation of biogas plants with an output of 100kW to 3,500kW.

In addition to engineering, which also includes services at your plants by our skilled and trained employees, we are also actively operating in the fields of Biogas OPO (Own Plant Operations), energy efficiency and agriculture.

Biogas plants are constructed using our tried-and-tested Biogest PowerRing technology which offers numerous advantages in terms of energy efficiency, operating safety and availability.

PowerRing and PowerCompact biogas plants have been operating successfully for more than 10 years, installed at over 100 reference plants.

Contact
T 0043 224320840
office@biogest-biogas.com
www.biogest.at/en

BIOGASKONTOR Köberle GmbH

BIOGASKONTOR Köberle GmbH is a pioneer in the development of technology for safe biogas plants. Graduate Engineer Erwin Köberle has decades of

experience in the development, construction and operation of biogas plants. Based on this experience BIOGASKONTOR has developed components for the safe and reliable operation of biogas plants. In technology and safety BIOGASKONTOR sets international standards. More than 20,000 BIOGASKONTOR bull's eyes are currently in use worldwide. The bull's eyes include a patented sealing and fixing system, that makes installation in a round opening very quick and easy. Different types and many accessories are available. The windows are approved by DLG (German Agricultural Society) as well as the pressure valves, designed for digesters with membrane covers (ÜU-TT) and for concrete covers (ÜU-GD) in different sizes. With high-quality biogas technology BIOGASKONTOR



is your reliable partner for the efficient and safe operation of biogas plants.

Other components available are air dosing units for desulfurization and measuring units for temperature, sample taking and level sensors. Operation manuals are available in many European languages.

Contact
T +49 (0)7375 950380
info@biogaskontor.de
www.biogaskontor.de

Hydrodynamic Cavitation Technology

CaviMax integrates the ROTCAV cavitation reactor into your process line to provide you with product better, faster and with less energy. Cavitation is maxing processes in the following sectors.

- Biogas
- Food & drink
- Brewing
- Distilling
- Biomass disintegration extractions
- Bioresources
- Biodiesel
- Oils & Biofuels
- Animal feed biorefining
- Water treatment
- Nutraceuticals.

Process Intensification lets you do more with less. Hydrodynamic cavitation produces millions of cyclical high-pressure micro bubble collapse events in liquid mediums which disintegrates solids & amalgamates



liquids/solids/gases subjected to the cavitation field in the spinning rotor-stator reactor chamber. Hydrodynamic cavitation forces are more powerful than mechanical or sonic sources, the cavitator manipulates high pressure fluid dynamics, the machine may be new tech, but the natural process is timeless. By the speeding up the rate of physical/chemical/biological reactions; energy, time and feedstocks are saved and yields increased.

Are you looking for a solution to



intensify and decarbonise your process? Then we have a test pilot plant and range of industrial sized reactors available to suit your operation.

Please contact Emma Greenwood, Business Development Manager, T +44 (0)7912 210369 www.cavimax.co.uk www.epic-srl.com/en

Largest Supplier of Biomethane to the UK Bus Market

Ceres Energy selected as one of the top 20 exhibitors at UK AD & Biogas Expo 2017.

The Ceres team utilises their extensive expertise to deliver exceptional services in the UK gas market. Ceres Energy, who recently relocated their Head Office to The Old Grammar School in Northumberland's historic market-town Hexham, is a fully licensed UK gas shipper and supplier. The company provides outstanding gas trading and



operational management tailored to producers at any scale linking upstream supply to downstream end users. Their gas trading team has an in-depth knowledge of gas supply and is bringing new entrants into the gas market, making it more competitive and vibrant. Ceres manage as an increasing part of our business

a wide portfolio of renewable biogas for transport companies across the UK, securing gas from sustainable sources for supply (delivery) to end users. Ceres has been fully engaged with market participants from the outset of this rapidly developing market and Ceres is currently the largest supplier of biomethane to the UK bus market.

T +44 (0)1434 602700
info@ceresenergy.co.uk
www.ceresenergy.co.uk