

energise

Energy & productivity team goes from strength to strength

Since its launch in 2011, ABB's energy assessment team continues to strengthen with over 60 engineers from within ABB and throughout its UK network of authorised value providers now engaged with energy, productivity and reliability assessments.

Originally the energy assessment team offered industry and commerce an analysis of the energy saving potential within a plant's motor-driven applications, in just half-a-day. Today the team can help assess potential productivity enhancements as well as identify maintenance improvements by providing a free, no obligation energy, productivity and reliability assessment, in which a plant's installed motor base is examined.

The benefits include:

- Low-cost or no-cost investment opportunities in reducing energy consumption and CO₂ emissions
- Clearly identified energy savings and CO₂ emissions reduction
- Estimated payback times
- Scope for employing available technology, including drives and electric



- motors for applications such as pumps, fans and compressors
- Review of current maintenance schemes and spares holdings

The team have extensive practical experience of carrying out assessments and their knowledge is updated regularly with compulsory attendance at ABB's intensive energy, productivity and reliability assessment training course.

An engineer is never more than 45 minutes away from any industrial or commercial site in the UK. What makes this team extra special is that they take the time to understand a customer's process by getting to grips with the impact of motors when applied to fans, pumps and compressors.

To find out more or take advantage of a free no obligation assessment, contact ABB on **07000 374837** or email: **energy@gb.abb.com** ref: Free energy assessment.



Matthew Gibbons,
Engineering Services
Manager, Gibbons

It's time to get connected

The big discussion among our customers is how to get ahead in their respective industries by leveraging the Internet of Things (IoT).

Last year ABB launched the world's first low cost sensor for tracking the performance of low voltage motors. A clever pocket-sized device is simply attached, without wiring, to the frame of an LV motor, from where it sends regular live updates on the condition of the motor to maintenance crews.

As a further IoT example the advanced apps now available for variable speed drives allow parameterisation and tuning via Bluetooth-connected smart devices, speeding up commissioning and optimisation and ensuring maximum efficiency of connected devices.

As these examples prove the IoT isn't something vague and blurry in the future that you can afford to ignore. It exists now – and so do the opportunities it offers. So what are you waiting for? Call us today to find out how we can help your business to get connected.

Want to save energy? Get the App

Download ABB's AVP energy toolkit app to discover the energy, CO₂ and money you could save by installing an ABB drive to control your application.

The app produces an instant mini-report that contains details of a matched ABB motor-drive package and can be forwarded to the ABB authorised value provider for your area – Gibbons.

To download the app, visit the Apple App Store on your iPhone or iPad and search AVP energy toolkit.

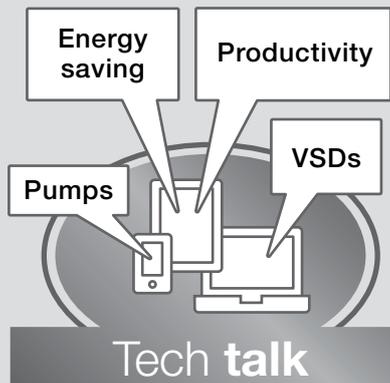


The AVP app shows you how much energy you can save.



Authorized
value
provider





Variable speed drives can improve both energy efficiency and productivity when applied to either constant-torque or variable-torque applications. In this series, we highlight a specific application and explain the main improvements in energy and productivity that can be achieved by installing a VSD.

This issue: **PUMPS**

How it works

VSDs transport liquids safely by ensuring the motor driving a pump is running at the correct speed to maintain a safe pressure in a pipe. VSDs benefit all types of pumps including circulating water in HVAC systems, boiler feedwater pumps, industrial process cooling pumps, chilled water pumps, wastewater treatment and clean water applications.

Energy saving

In the UK, pumps use a total of 20 TWh/annum, responsible for the emission of 2.7 MtC/annum (2.7 million tons of carbon). Pumps represent the largest single use of motive power in industry and commerce. Since pumps are variable-torque, they benefit from the largest savings when speed control is employed.

Productivity

VSDs improve system reliability, simplify pipe systems by eliminating the need for control valves and by-pass lines, provide soft-start and stop thereby reducing wear and tear on the motors, and reduce leaks caused by pressure surges. All this leads to lower maintenance and life cycle costs and increases plant availability.

Waterproof motor/drive package launched for ultra-hygienic processes

Gibbons has launched a stainless steel motor and ABB ACS355 drive package – offering dust-tight equipment that's fully resistant to high-pressure water jets.

In an increasingly competitive marketplace, operators of applications such as food and beverage, chemical and pharmaceutical processing are under pressure meet the highest standards of hygiene - and the repercussions of falling below these levels are unthinkable.

Failure to maintain cleanliness standards of electric motors and other equipment can result in product contamination, not to mention reduced efficiency and premature failure.

The problem is that washdowns with high-pressure water jets not only risk damage to motors and drives, they also spray debris onto equipment, which finds its way beneath rating plates and cooling fins. This provides a perfect place for bacteria to thrive, while the ingress of water can permanently damage components. However, solutions do exist in the form of waterproof electric motors and variable-speed drives.

Gibbons' stainless steel motors have a completely smooth surface free of cooling fins or rating plates – with information laser engraved. There's no paint to peel, chip or flake off, and the IP69K totally enclosed non ventilated (TENV) casing means they can withstand powerful water jets.



Gibbons' motor and ABB ACS355 drive package.

For optimal speed control and energy efficiency, Gibbons can couple the motors with ABB ACS355 variable-speed drives, which are rated at IP66/67 ingress protection – meaning they're dust tight and impervious to water. Plus, a keypad membrane cover means the unit can be operated normally in all conditions.

For more information on this essential motor/drive package, call Gibbons on **01621 868138** or email **info@gibbonsgroup.co.uk**

Gibbons Engineering expands its team

Gibbons Engineering Group has responded to increasing demand for its range of energy-efficient electrical and mechanical products and services by recruiting **Natasha Dyke as Field Sales Representative.**

Natasha's varied role encompasses the full Gibbons range, including electric motors, pumps and industrial gearboxes, and she will be busy identifying new customers and developing relationships while

maintaining Gibbons' excellent connections with its existing clients.

Natasha can be contacted on **07966 423165** or by email at **natasha@gibbonsgroup.co.uk**



Rapid installation of ABB drive keeps sea lions on view

Colchester Zoo avoids disappointing visitors to one of its most popular attractions following the rapid installation of an ABB variable-speed drive (VSD) to replace a failed unit.

Following a power cut, the non-ABB installed drive on the ozone pump in the zoo's sea lion enclosure reported an under-voltage fault when attempts were made to re-start it.

ABB authorised value provider, Gibbons Engineering Group, received the call from the zoo at 08:00 and had an engineer on site within two hours. After determining that the installed drive was damaged, a replacement 22 kW ABB drive was collected from Gibbons' stock. Mains and control connections were set up and the pump was operational again by 13:00.

The VSD plays a vital role in keeping the sea lion tank clean and the mammals healthy. Craig Hamnett, electrician for Colchester Zoo, says: "It was important that we get the pump back in operation within 24 hours, otherwise algae would develop in the pool, seriously degrading



An ABB drive made sure visitors to Colchester Zoo were not left disappointed.

its clarity. This would have meant disappointing visitors to this popular attraction."

The ozone pump is one of four pumps operated in the enclosure. Ozone is converted from ordinary oxygen in the ozone generator. The ozone is then pumped into the water by the ozone pump. This kills bacteria and is a vital stage in keeping the enclosure healthy.

The sea lion enclosure, named Playa Patagonia, features a 2.5 million litre water tank complete with an underwater glass tunnel that allows visitors to see the sea lions swimming. The enclosure is currently home to five female Patagonian sea lions but can hold as many as 12.

London taxi maker uses PLC to cut downtime risk

Response time to production challenges is reduced by up to 33 percent following installation by The London Taxi Company of an Andon system featuring ABB programmable logic controllers (PLCs) and human-machine interfaces (HMIs).

The manufacturer of the world famous black cab installed the Andon system to allow shop floor workers to report production problems and escalate them until they are solved.

Andon, from the Japanese word lantern, is a system of colour coded lights that

signal the status of any production line challenge. The system increases the urgency and efficiency of response, improving productivity and forcing managers to focus on line stopping issues, while also preventing faults moving on down the line.

The system provides every manufacturing station on the production line with a pull cord. When a problem occurs on the line, such as a lack of parts or a machine stoppage, a production line worker pulls the cord and a light comes on. The light

summons the relevant team leader to the workstation. The team leader then decides whether it is a simple problem that can be resolved immediately or a more serious challenge requiring help from an external department.

Data has already shown improvements in performance. For example, the chassis line had a response time target of one minute. Figures show this being reduced to only 39 seconds, an improvement of around 33 percent.



Response time to production challenges is now 33 percent shorter at The London Taxi Company.



Contact us at our Essex office.

Post
 Gibbons Engineering Group Ltd
 Woodrolfe Road
 Tollesbury
 Maldon
 Essex CM9 8RY
 United Kingdom

Telephone
 Tel: +44 (0)1621 868138

Email
 For general enquiries:
info@gibbonsgroup.co.uk

Who are we?

Gibbons Engineering Group Ltd (formerly Gibbons Drive Systems Ltd) is an electrical and mechanical engineering company that has been proudly serving its customers for almost 50 years. As a member of ABB's exclusive authorised value provider network, Gibbons offers distribution, installation and start-up of ABB low-voltage AC variable-speed drives.

Our comprehensive range of drives covers a vast number of applications, from micro drives used in machine building to industrial drives for the control of processing lines.

We can supply high-performance, energy-efficient drives directly from stock for next-day delivery, backed up by our outstanding bespoke service.

Gibbons Engineering Group is committed to the highest standards in quality, health and safety and environmental management.

What we do

Within our group of companies we provide the following products and services to the manufacturing, production, commercial, industrial and agricultural markets:

- Electric motor sales, rewinding and manufacture
- Supply, installation and support for ABB drives
- Variable-speed drive hire
- Design, manufacture and installation of humidification systems
- Bespoke panel building
- Fan manufacture
- HVAC site services including upgrades, variable-speed drives and on-site condition-based monitoring
- On-site service, repair, refurbishment and upgrade of air and water systems including fans, AHUs, motors, pumps and humidification systems
- Testing, modelling, specification, supply and installation of low-maintenance ultraviolet-C (UVC) light disinfection solutions for HVAC systems



The Gibbons head office in Tollesbury.

COMPETITION • COMPETITION • COMPETITION • COMPETITION • COMPETITION • COMPETITION

Answer the following questions for your chance to win a £50 Marks & Spencer voucher

The answers to these questions can all be found within this issue of Energise. Good luck!

1. Complete this sentence: ABB's AVP energy toolkit app shows you how much energy, CO₂ and _____ you can save by installing an ABB drive to control your application.
2. In the UK, how many TWh of electricity do pumps use each year?
3. There are two variants of ABB's new Inspection & Diagnostics service. Name one of them.

To enter the competition, just email your answers to energy@gb.abb.com along with your name, company name and daytime telephone number.

Three winners will be selected at random on October 31, 2017. Please note that the competition organiser's decision is final.



Authorized
value
provider

ABB