

PANKS

Est 1842



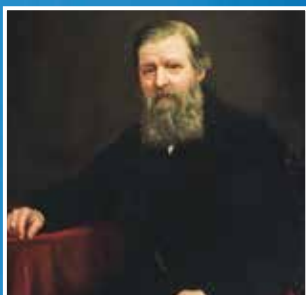
PANKS ENGINEERS

Exceeding Expectations

THE HISTORY

Panks Engineers was founded in 1842 when Abraham Pank moved from Bawburgh to Norwich. His business offered a broad range of steam engineering, gas, water and electrical appliances and supplies.

In 1906 Panks took over Holmes & Sons, a prominent local Agricultural Engineering company, and by the end of the First World War, Panks Engineers' interests were extremely diverse covering a huge range of mechanical and electrical products and services.



Abraham Pank



TODAY and THE FUTURE

Panks is a family business built on family values. Our current MD is sixth generation family and still holds the values true to our founder. We believe in our team and have been running our own apprenticeship programme for more than twenty years to train most of our existing workforce.

We operate from over 16,000 square feet of offices, stores and a workshop based in Heigham Street Norwich as well as our branch at Olympus Close in Ipswich.

Our workshop has ATEX approved engineers and houses both a clean room and general repair area. We have extensive lifting capability from front to back and can move up to 5 tonnes if required.

We have a comprehensive, in-house test area for ensuring the correct performance of our repaired units up to 75kw. We can also run up to 40 bar for pressure and flow testing.

Panks is a technically minded pump company which design projects from concept to completion, delivering full turnkey packages across a wide range of industries. We take our responsibilities seriously and will only utilise the correct equipment based on experience and knowledge.

Energy efficiency forms a core part of our offering and as such we are part of Anglian Water's Energy Team, striving to save energy wherever possible. This involves our conducting full surveys to ensure that the correct pump and control systems are in place to gain efficiency savings across the board. We also carry this out for our industrial clients.

The Panks team is complemented by our close working relationships with the leading pump manufacturers and equipment suppliers from around the world, allowing Panks to deliver a high quality and long lasting solution, assisted by our fantastic service team.

We hope to be able to work for, with and alongside you.



Chris Pank - MD

Page CONTENTS

4 **PUMP SALES & SPARES**



5 **WATER TRANSFER**



6 **IRRIGATION**



8 **BOREHOLES**



9 **WATER TREATMENT**



10 **RAINWATER / STORAGE**



11 **ENERGY SAVING**



12 **WASTE WATER**



14 **INSTALLATION**



16 **ELECTRICAL**



17 **HEATING**



18 **PUMP REPAIRS**



PUMP SALES and SPARES

With over 175 years of history, Panks has evolved into an established business able to supply pumps and equipment for domestic, industrial and commercial markets in almost every sector; including clean water, waste water & effluent, fuel, chemical and food processing.

Our facilities in Norwich and Ipswich boast a large selection of pumps and accessories from a wide variety of manufacturers, supported by knowledgeable staff with a wealth of experience. Our trade counter is open to all from 08:00 – 17:00, Monday to Friday and we are happy to discuss your requirements and even help plan and design your pumping system.

Along with a large selection of stocked pumps, we have a good range of genuine spares and can supply to order almost any pump or part from most manufacturers. We also stock generic spares such as mechanical seals, bearings and electrical components. With an extensive range of pipes, hoses, fittings, valves and gauges, we can get your pumps and equipment fully connected.

Our machine shop, fabrication bay and paint spray booth complete the many services we can provide.

We can supply pumps and spares from a wide variety of manufacturers, including but not limited to;

- ABS/Sulzer
- Biral
- DAB
- Flygt
- Grundfos
- Herborner
- KSB
- Lowara
- Mono
- Oase
- Stuart Turner
- Tuthill
- Varisco
- Wilo



WATER TRANSFER and BOOSTING

Water transfer and boosting applications are numerous and applicable to all sectors, including industrial, water utilities, commercial, agricultural and domestic. We can specify and supply the correct pumping system and associated pipes, valves and controls to suit any application. With modern monitoring and control equipment we can automate the process and ensure that all is run in an efficient and practical manner.

Low water pressure is a common problem and at Panks we can help overcome this issue with a range of pressure boosting products. From single pump applications to multi pump packaged booster sets, we can help specify and supply the correct system for you. With variable speed technology and increased motor efficiencies, we can ensure your pumping solution is economical to run and helps to minimise energy consumption.



AWS Whitlingham WRC - Wash Water Scheme

Domestic, commercial or industrial, we have the solution for you. Call, email or drop in at our trade counter and we can discuss and advise the suitable product for your application.



We supply storage tanks and break tanks to complement the parts we offer, and can advise on current water authority regulations regarding the installation to ensure that our products comply with current legislation.



IRRIGATION

Water is a vital and precious resource and using it to its maximum capabilities is a vital part of our responsibilities.

At Panks Engineers this is our first consideration and we apply this philosophy across all sectors.

We work with clients who are interested in making sure their irrigation systems are working to their maximum potential. Our irrigation team strive to achieve the best results at the most economic rate.

Our irrigation services cover a wide range of sectors, including:

- Agriculture, especially drip systems
- Vegetable & fruit growers
- Commercial horticulture
- Nurseries and garden centres
- Turf, including all sport requirements and artificial turf
- Equestrian facilities
- Landscapers
- Home owners

As part of the irrigation remit we also cover:-

Dust settlement and damping down.

Lake and water features with the world leading Otterbine equipment to provide healthy water environments.

Trenching and mole ploughing, which is also available for hire.

Domestic



Domestic garden with borehole.

From small to large gardens we can supply and install irrigation systems to meet your requirements. We have invested in the latest trenching machinery to ensure your watering system is installed swiftly, efficiently and with the minimum amount of disruption.

Having a domestic irrigation system can save you time and money. Due to huge advances in irrigation technology you can now view, manage, and monitor your irrigation controller from your phone, tablet, or computer to prevent wasting water.



Irrigation installation team.

Sport

If you need a pristine golf course, bowling-green or quality sports turf, we have the watering system for you. At Panks we provide a range of solutions from portable sprinklers to fully automated irrigation systems.

We work with:

- Golf courses
- Football & rugby pitches
- Bowling greens
- Hockey pitches
- Race courses



A national sports centre, with recently revamped Desso pitch.



Full aeration and pond pump service.

Agricultural & Horticultural



Mixed commercial nursery.

Panks is proud to have worked with farmers across the Eastern region for over 170 years. We have moved with the times and understand the increasing need for more efficient and energy conserving solutions to meet the demands faced by today's agriculturalists. As ever, our goal continues to be to achieve the best results for you.

Panks can design, supply and install systems to suit a number of crops including large irrigation systems, drip irrigation and sprinkler systems. We can cater for fruit, vegetables and crops of all types.

Dust Suppression

If it is commercial dust and odour suppression you require, Panks irrigation will take care of it. Working in line with all current legislation we will meet your health and safety requirements for a safer working site.

BOREHOLES

Take advantage of the resources under your feet! 20,000 litres of water per day can be removed, without requiring a license.

For domestic, commercial, agricultural or industrial use, there are no limits to who can use this resource.

We have over 75 years of experience in drilling boreholes and finding water, and have access to detailed hydrogeological data on the Anglian region, dating back to well over 100 years. Please contact us to see what is possible for you.



New bore-head.



Boreholes are narrow shafts, drilled into the ground and generally lined with either steel or PVC tubing. They are used to gain access to underground reservoirs, known as aquifers, which are stored in either chalk, limestone, sandstone or sands & gravels. The depth and diameter of the drilled bore will depend on the nature of the underground strata, the depth of the aquifer in that area and the amount of water required.

At Panks, we not only drill and line the bore hole, but supply and install the necessary pumping equipment and controls to ensure the water gets to where it is needed.

The quality of the abstracted water is often very good, however we can offer a full analysis service to identify the exact nature of the water, with comprehensive treatment to bring the water up to the required standard.

We offer complete scraper system replacement to filtration tanks and hold a comprehensive stock in our Stores Department to ensure we can meet our clients' high expectations. We also provide complete pumping station installations tailored to geographical surveys.

WATER TREATMENT

Water quality is crucial in both domestic use and industrial processes and, at Panks, we have the products and experience required to get your water up to the required standard for clean and drinkable water. Abstracted ground water can often be laden with unwanted minerals, as the rainwater which forms the underground aquifers absorbs these impurities from the air and the earth as it seeps through sand, soil and rock. It dissolves large quantities of calcium, iron, manganese, aluminium, magnesium and other unwanted compounds such as nitrates, nitrites, chlorides, sulphates, lead and others. Some of these can be harmful to health whilst some can just be inconvenient, leading to bad smells or staining.

In Norfolk, we live in a hard water area and both ground water and mains-supplied water can be laden with minerals such as calcium and magnesium, which are responsible for what we term as hard water. This leads to a build-up of scale on taps, in pipes and also in appliances such as washing machines, kettles, boilers, etc. This can lead to reduced life expectancy and increased inefficiencies in these appliances. When hard water is used in industrial processes it can cause complications and have cost implications to expensive machinery and processes.

Water can also be a breeding ground for unwanted bacteria, such as salmonella, e-coli or legionella which can lead to health problems and issues ranging from mildly discomforting to life-threatening.

With our range of filters and softeners, activated carbon, ultra-violet treatment, chlorination and reverse-osmosis technology, Panks can treat water and remove all of the above impurities to get your water to the expected and required standard, so that you can be sure that you can have the purity you require for your system.



In East Anglia bore water is very hard, and can require a water softener due to calcium build up.



An installed Water Treatment System.



Installation of an Ultra Violet Light Treatment System.

RAINWATER HARVESTING

Above the immediate economic savings, the benefits are numerous. Harvested rain water can be used for irrigation or as drinking water for animals.

In Norfolk and Suffolk, areas with notoriously hard mains water, rainwater harvesting provides the natural softer alternative; a chemical free alternative that plants respond well to and which does not scale up your equipment.

Rainwater runs off from roofs and down guttering, through downpipes and is filtered, stored and passed through a water treatment plant, if required, before a packaged pumping station delivers it to where it's needed.

The UK Government is driving forward initiatives to increase sustainability and rainwater harvesting and we are on hand to meet your need for trusted and reliable installations.



Make the most of your natural resources.

WATER STORAGE

At Panks we offer the highest quality water storage tanks which can be used in a number of industries, both large and small to suit your requirements. For example, WRAS and DWI approved drinking water and beverage storage tanks to chemical storage, process and mixing solutions.

We offer a fast, easy and supportive experience to a diverse customer base.



Galvanised and corrugated steel water tanks, specifically designed to hold large volumes of water.



Plastic water storage tanks.

ENERGY SAVING

- Pumps currently account for 10% of the world's total electricity consumption.
 - More than 20% of all the power used by motors in Europe is used to drive pumps.
 - 90% of all pumps today work inefficiently.
 - If we switched them all to energy efficient pumps, we'd save the equivalent of the residential energy consumption of 1 billion people.
- Here at Panks we offer a unique and bespoke service. We record the flow, pressure and power from the pump to create a correct system curve. We give you the before and after data to show you exactly what you will be saving, and most importantly how quickly the system can pay for itself.



As part of the successful ongoing Anglian Water Energy Programme, in conjunction with Flygt, we were asked to carry out a survey of Trowse Main TPS.

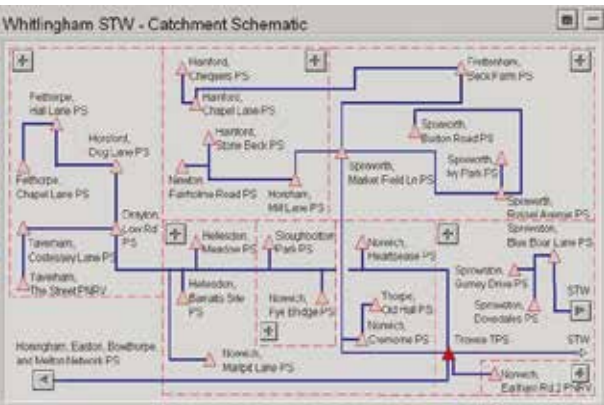
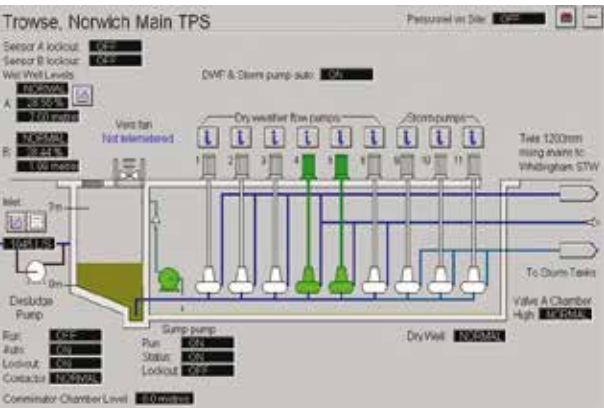
BEFORE

A full survey was undertaken by Panks and an amazing full year energy capture of £59k was predicted, if pumps 4, 5 & 6 were replaced with energy saving Flygt NT 3400 140kW pumps.

As the full cost of the scheme totalled £236k, this meant that it could be completely funded by the energy capture and, as the scheme had a payback of only 4.74 years, it fell within the criteria set out by the Energy Team.

AFTER

We are pleased to confirm that the **actual** energy saving was slightly higher than forecast, and has now been confirmed as £61,414 per year, which equates to a saving of 727,648 kW hours per year, reducing the payback period to only 3.85 years.



WASTE WATER/EFFLUENT



Scraper bridge refurbishment on sewage treatment works.



Packaged pumping station to suit all needs.

IF YOUR WASTE WATER IS NOT DRAINING INTO A MAINS SEWER, CALL PANKS FOR A SOLUTION!

Less than 10% of water drawn through the day is used for drinking and up to a third ends up in sewage systems. In fact, on average in the UK, a person produces approximately 150 litres of waste water per day, from flushing, showering, cooking, washing clothes or dishes, brushing teeth and bathing.

For most in Norfolk and Suffolk, this waste water is fed directly to the mains sewage system via gravity but for some, where there is no mains sewer nearby or if the waste discharge point is lower than the sewer access point, an alternative solution is required – and Panks has the answer.

For new builds or extensions to existing properties, dwellings or businesses off the beaten track, campsites and care-homes across East Anglia, Panks can supply the entire packaged pumping station to deal with your waste water and effluents.

Our gravity fed storage chambers in either GRP or high density polyethylene, generally buried beneath the ground, are connected to the nearest available sewer via a suitable pipe (known as a rising main). Submersible pumps within the chamber pump the waste to the sewer via the rising main – the pumps are operated by level controls or float switches within the chamber, which turn the pumps on as water levels rise in the chamber, and then off again when the level drops.

We provide energy efficiency surveys and installations to ensure the lowest running costs across water treatment works and pumping operations.

If your site cannot be linked to a main sewer, you can install a treatment plant. In the underground storage chamber bacteria is added and oxygen drawn in via a pump. The bacteria breaks down the waste material and the remaining liquid waste can be drawn off into a secondary chamber and pumped safely away to a soak away, ditch or drain.

No matter what your type of building, or the number of people using its facilities, Panks can advise, size, specify and supply the most suitable solution for your requirements with one of our packaged pumping stations

The Eastern region is a popular destination for holidaymakers. The campsites, caravan parks, marinas and golf courses are all busy places but often in out of the way locations; don't let disposal of waste water be a headache for you!

We understand the legal requirements linked to your business and waste water disposal. Let us do the calculations and we will work out the number, size and type of storage tanks and pumps you require – and you can trust us to cost it efficiently. Our follow-up commissioning and servicing contracts will provide peace of mind, leaving you to focus on your business.



AWS Trowse - Replacement dry weather flow pumps.



Bedford - intermediate waste water pump replacement.



On-site service of a sewage pump.

INSTALLATION and SITE SERVICES

From providing labour only to full Project Management, our Contracts Department will ensure that the project is delivered safely, to programme and to a quality that has kept Panks as a leading service provider for over 175 years.



DESIGN SERVICE

We visit clients' sites to carry out a full survey and discuss at length the project requirements. If a design service is required we can provide the following:

- Autocad drawings
- Process design
- Efficiency calculations
- Panel design
- Wiring diagrams
- Cable calculations
- Structural calculations
- Electrical control systems
- Energy optimisation

SAFETY

- Panks has accreditation of Achilles Category B2 Certificate for Safety, Health, Environmental & Quality practices, also CHAS Health and Safety Accreditation. All operations are carried out in accordance with company procedures and all sites and management personnel are regularly audited by our Safety Consultant & Health and Safety Manager.
- Panks have management personnel with IOSH Construction Site Managers Safety Certificate, and a NEBOSH qualified manager.
- Panks carries out regular toolbox talks to keep our engineers aware of any updates or information critical to their safety and the ways in which their works are to be carried out.
- All work operations are covered by risk assessments and method statements.

QUALITY

- Panks has accreditation to ISO 9001:2008.
- All operations are carried out in accordance with company procedures and all sites and management personnel are regularly audited by our own full time Compliance Manager.
- MMA, TIG MIG welding processes, weld procedures to BS EN ISO 15614-1 with welders qualified to ASME IX.
- NDT inspection including Gamma Radiation, MPI, DPI and hydrostatic pressure tests.

ELECTRICAL INSTALLATION

- Industrial installations
- Commercial installations
- Testing and inspections
- Variable speed drives
- Panel building
- Instrumentation
- Telemetry control
- Complex trained engineers
- NICEIC approved
- ECA approved

MECHANICAL INSTALLATION

Pipe Fabrication in:

- Carbon steel
- Stainless steel
- Ductile iron
- PVC
- ABS
- HDPE
- PTFE lined mild steel
- Non-ferrous alloys
- Pump installation
- Structural steelwork
- Access solutions
- Vessel installation

TRAINING AND QUALIFICATIONS

All of our highly skilled Site Engineers carry CSCS cards. Panks maintain a comprehensive training matrix to ensure our staff are ready to meet our clients' installation needs. The training list includes but is not limited to:

Confined Space, PASMA, MEWP, Banksman, Slinger, Fork Truck, HIAB, EUSR, Fire Marshall, Working at Height, Gas Safe, Asbestos Awareness, Manual Handling, Overhead Crane, Mini Digger, Trencher, Mole Plough, Percussion Drill, SMSTS, IOSH, IPAF, Amtech, Compex. MIG, TIG, and MMA welding.

- We can provide Designer and Principal Contractor roles in accordance with Construction (Design and Management) Regulations 2015.
- Panks regularly co-ordinates and manages specialist Sub-Contractor partners to provide a full package install to our clients. This includes access requirements, civils, installation, on-site load testing and inspection.
- We have a Qualified Contracts Manager to assess complex lifting operations and ensure the most suitable lifting plan is employed, either in-house or through specialist lifting contractors.



AWS Whittingham WRC SAS Pumping Station.



AWS Gt Whelnetnam Boll Filter Installation.



AWS Whittingham WRC Boll Filter Installation.

ELECTRICAL and MECHANICAL

Are you looking to meet government guidelines for reducing your industry's impact on the environment? Do you need to ensure health and safety legislation is met? Are you taking on a new commercial build in East Anglia and need to accumulate BREAM scores?

The good news is, with Panks' mechanical and electrical engineers on board, you can do all this – whilst also making efficiency gains for your business. We work with you, the customer, to establish your goals and find the best way to meet them.

Panks practices environmental awareness, therefore we fully understand your need to reduce your carbon footprint and meet health and safety requirements in line with the Environmental Agency guidelines.

WORK CAN BE UNDERTAKEN EITHER IN OUR WORKSHOP OR ON SITE WHICH INCLUDES:

- Electrical installations
- Electrical control gear installations
- Diagnostics
- Control panel design and build work

We hold in-house welder approval to BS 4872-1 and our structures are fabricated and installed to BS EN ISO 14122 1-4 2001 & BS EN 10025:2004.

We also install electrical heat tracing and thermal insulation which is installed to provide frost protection.

Panks electrical testing and certification of installations are all in accordance with the latest wiring regulations. i.e. IET Wiring regulations 18th edition.



Test and verification of electrical circuit.



Installation of control panel and wiring.



On site servicing and maintenance.

HEATING

Our Heating Engineers can assess your existing systems or plans and will work with you to find the best solution. We can overhaul or upgrade your heating systems to ensure efficiency gains.

Panks is proud to have worked in partnership with key local authorities and commercial enterprises across the Eastern region, helping to keep people warm and safe for over 100 years.

From a small scale domestic boiler to an entire district heating system in a school, medical centre, hospital or care-home - no job is too big or too small.

VENTILATION & AIR CONDITIONING

For internal climate control we can offer a full range of cooling and ventilation systems, from small domestic split systems to fully ducted commercial installations. The systems come with adjustable temperature controls and variable speed drives to ensure you can set comfortable temperature levels whilst not using more energy than you need.



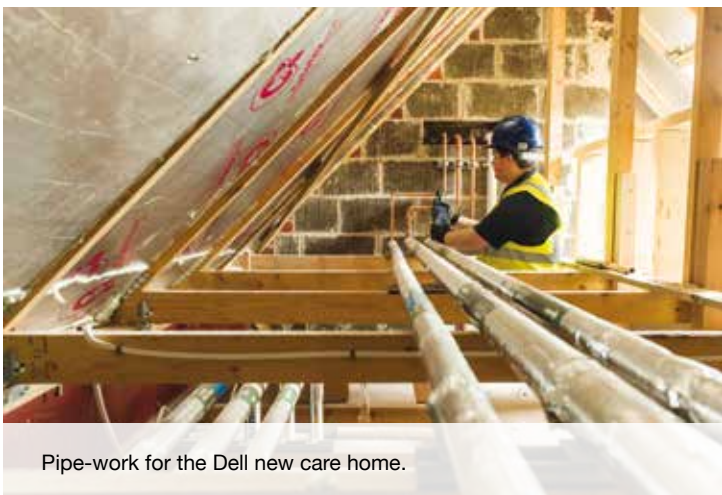
BMS Panel - Barnards Yard boiler house.



Installation for new flats at Fakenham.



Site visit to record flow rates.



Pipe-work for the Dell new care home.

DEDICATED IN HOUSE PUMP REPAIR SERVICE

At Panks we have a fully equipped, state-of-the-art workshop with a twin 3.2 tonne overhead crane. We also have a recently refurbished test bay, paint spraying booth and machine shop which contains lathes, milling machines and drills. Completing our specialist facilities, we also have a separate clean room and clean water test bay, where we can strip and repair all food processing and potable water pumps.



All our repairs are completed to a high standard.

Our engineers are electrically and mechanically trained; having these skill sets enables our team to quickly diagnose and then rectify pump, motor and gearbox faults on all the main pump manufacturers which include: Flygt, Flowserve, KSB, ABS, Biral, Grundfos, Lowara, Mono, Wilo, DAB plus many others.

Our vast skill sets, knowledge and extensive pump library allows us to not only overhaul current model pumps, but to also repair old units where spares and the pump itself have become obsolete. This can be achieved by making bespoke spares to re-manufacture or repair the spares that are in a poor condition, which then allows us to get the pump back into service.



Before and after photo of a 60KW submersible pump overhauled in our workshop.



Centrifugal pump set overhauled in our workshop.

Panks is a member of the AEMT (Association of Electrical and Mechanical Trades). This qualification enables our workshop team to inspect and repair explosion proof (ATEX Approved) pumps and motors in many industries, including the Offshore sectors and the MOD.

Corrosion and erosion is a common problem that we find in hydraulic pump ends. It doesn't stop at that either, some pumps suffer from severe scale build up due to the fact that we live in a hard water area. A cost effective process to overcome these problems is to coat the hydraulic end in a special coating. Our engineers have the qualifications to apply these coatings. This is something that many of our customers have taken advantage of and are now seeing the benefits. Various coatings are available for process, industrial, waste and potable water applications (WRAS approved).



Protective coating applied to an impeller, coating prevents corrosion.

We take an enormous amount of pride in the quality of our work and we continually strive to retain your custom.

Not only is it important for the pump to be repaired to a high quality engineering standard, using genuine pump spares, but it's also important for it to look aesthetically pleasing to you, our customer.



Multistage pumps overhauled, ready for despatch.



Pump set re-installed once overhaul had been completed.



PANKS ENGINEERS LTD

The Old Tannery
8 Heigham Street
Norwich
Norfolk NR2 4TE

Sales Tel: +44 (0)1603 620294
Service Tel: +44 (0)1603 729999

Fax: +44 (0)1603 762679
Email: sales@panks.co.uk

PANKS ENGINEERS LTD (IPSWICH)

Unit C Olympus Close
White House Industrial Estate
Ipswich
Suffolk IP1 5LJ

Tel: +44 (0)1473 744899
Fax: +44 (0)1473 744060

Email: ipswich@panks.co.uk



Also within the Panks Group

PANKS

**Auto Electrical
& Components**

PANKS AUTO ELECTRICAL LTD

Flower in Hand Yard
15 Heigham Street
Norwich
Norfolk NR2 4TE

Tel: +44 (0)1603 629967
Fax: +44 (0)1603 62996

Email: sales@panksauto.co.uk



www.panks.co.uk