







## DANDO DRILLING INTERNATIONAL

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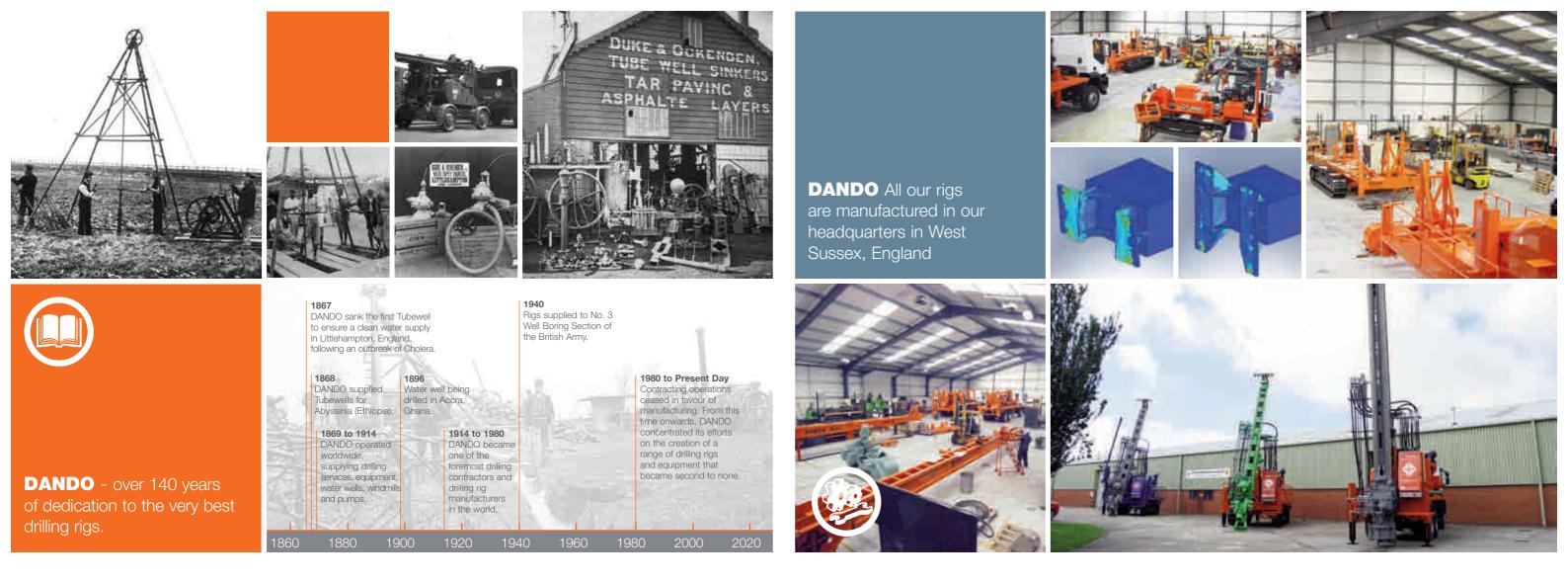








## DANDO DRILLING INTERNATIONAL



## THE HISTORY OF DANDO

The roots of Dando Drilling go back to 1867 when the company founders, Reginald Duke and Albion Ockenden, sank the first tubewell to ensure a clean water supply in Littlehampton, England following a cholera outbreak.

Dando has since become one of the foremost drilling contractors and drilling rig manufacturers in the world. In 1980 the decision was made to cease the contracting operations in favour of manufacturing, with efforts concentrated on the creation of a range of drilling rigs and equipment that became second to none.

Dando is active on every continent, with the working lives of many rigs stretching into four decades. Applications for Dando equipment include mineral exploration, water well drilling, geotechnical investigation and seismic exploration. This long history has given Dando the opportunity to accumulate a large body of knowledge and expertise in all areas of the industry.

Today, as a part of the Energold group of companies, Dando is looking ahead to a strong and secure future at the forefront of drill rig development while adhering to the principles that have shaped Britain's number 1 rig builder.

## DANDO AND MANUFACTURING

Dando are proud of their successful manufacturing heritage and have led the drilling rig manufacturing industry in the UK for decades.

Using the very latest SolidWorks modelling software our engineers and designers are able to bring better product to market, faster while making cost savings for our customers. The same software and techniques are also used to improve existing products as part of an open-ended development program. The fully equipped manufacturing facility in the South of England employs sophisticated resource allocation and inventory management to keep standards high and lead times short.

Dando is also home to some of the world's best drilling rig hydraulic designers and fitters.

**DANDO** can supply a rig for drilling 50ft to supply a small community with clean safe water, often for the first time, while also being able to manufacture and deliver plant that can drill 1000m deep wells as part of major infrastructure projects.







Dando regularly supply and work to specify and deliver appropriate equipment packages with:

- Governments Agencies
- NGOs
- Charitable Organisations
- Private Contractors

## DANDO AND THE DEVELOPING WORLD

In the context of a rapidly changing world of globalisation, climate change and political uncertainty, it is hard to overstate the importance of a resource as fundamental to human survival as water.

Dando Drilling have been actively marketing, designing, selling and shipping water well drilling rigs into Africa and the developing world for longer than any other manufacturer. Over this time we have developed experience second to none in supplying drilling rigs to access this precious resource.

The Watertec top drive rotary drilling rigs are recognised as the most capable and extensive range of water well drilling machines available anywhere. Dando rigs are built to last for decades and work in extremes of climate that would see the failure of anything but the toughest of machines.

## DANDO WATER WELL DRILLING RIGS

### BUFFALO 3000

Using the straightforward but incredibly effective cable percussion drilling technique, the Dando Buffalo 3000 is a cost effective drilling rig perfect for installing hand pumped water wells in areas of poor infrastructure and difficult terrain.

### WATERTEC 6

This is a versatile compact strong rig capable of drilling water wells in excess of 200m deep. With various mounting options this exceptional rig is very popular across the world.

### MULTITEC 6000

Compact, lightweight multipurpose rig for water well drilling. See page 10 for more information.

### WATERTEC 12.8

Our latest design mid-range water well drilling rig is built to incorporate all the Dando robust features but at the same time remaining affordable. Capable of constructing water wells to 500m utilizing the on board mud pump or air drilling utilizing a separate compressor.

GLOBALLY, 1.1 BILLION PEOPLE HAS NO ACCESS TO ANY TYPE OF IMPROVED DRINKING SOURCE OF WATER.\*

The United Nation's Millennium Development Goals include the ambitious target to 'Halve, by 2015, the proportion of people without sustainable access to safe drinking water'. "World Health Organisation.



### WATERTEC 24

The Watertec 24 is an incredibly successful water well drilling rig developed specifically for use in demanding environments. The 24000kg pullback gives it a realistic drilling depth of 750m. Favoured by large aid agencies, government departments and contracting companies. The Watertec 24 is capable of a wide range of drilling techniques including flooded reverse.

### WATERTEC 40

This top-drive hydraulic water well drilling rig with 40000kg pullback is capable of drilling to great depths while mounted to a standard 6×6 truck. The 40000kg pullback gives it the ability to drill large diameter to great depths. Favoured by large aid agencies, government departments and contracting companies. The Watertec 40 is capable of a wide range of drilling techniques including flooded reverse.

### CONSUMABLES

As well as manufacturing world-class drilling plant Dando are able to specify, source and supply any and every part of a complete drilling package.







**DANDO** Mintec rigs are working throughout the world's reserves and prospects working to provide samples and data that will assist the extraction of various mineral resources.



## DANDO AND MINERAL EXPLORATION

Dando supply technologically advanced multi-purpose drill rigs which are reliable and robust for use in mining projects worldwide.

Dando rigs have been operating across the world undertaking work as varied as open-cast coal exploration, sampling of gold mining tailings, and core drilling in deep, hard formations.

All Mintec rigs can be equipped for reverse circulation drilling, conventional/wire-line coring and RAB drilling.

### MINTEC 6

The Dando Mintec 6 is a small rugged 6 ton multipurpose mineral exploration drilling rig capable of coring NQ to 600m and 4" RC to 190m.

### MULTITEC 6000

Compact, lightweight multipurpose rig for mineral exploration drilling. See page 10 for more information.

### MINTEC 12.8/12.8 COMPACT

The Dando Mintec 12.8 is a medium sized multipurpose mineral exploration drilling rig capable of a wide range of drilling techniques

including RAB, deep wireline coring and reverse circulation. Also available in a compact version with smaller tracks and no compressor.

### MINTEC 18/18 COMPACT

The Dando Mintec 18 is a multipurpose mineral exploration drilling rig capable of a wide range of drilling techniques including RAB, deep wire line coring and reverse circulation. Also available in a compact version with smaller tracks and no compressor.

### DANDO 2000/3000

A Geotechnical shell and auger drill rig with a host of new features carefully designed to complement the reliable, versatile nature of the tried and tested Dando 2000 and 3000.

### TERRIER

The compact, crawler mounted multipurpose Terrier is ideal for sampling and core tailings in soft alluvial formations to a depth of up to 40m.

**STRONG** Dando's team of designers and engineers pride themselves on the provision of both standard and bespoke solutions for the drilling needs of any and every project. Strong is a word which sums up the Dando experience; the strength and reliability of the machines, the trading strength of the company and, most importantly, the strength of Dando's commitment to put their customers first.

SAFETY Working closely with leading rotary rig guarding that is fully interlocked with the rig functions. Dando understands drilling and all of our guarding systems are designed to protect staff from the dangers components while being conducive to









## GEOTECHNICAL AND CIVIL ENGINEERING

As Britain's longest established and best known drilling rig brand, Dando have been building rigs for the civil engineering and building industries for decades.

### GEOTECHNICAL INVESTIGATION

The demands of the geotechnical driller are reliability, productivity and flexibility. The Dando range of geotechnical rigs offer the ability to use a full range of drilling techniques and hole diameters on plant that occupy the smallest possible footprint.

### "GEOTHERMAL" AND GSHP DRILLING

Heating and cooling buildings and homes by using heat pumps to transport heat to and from the thermal mass of the earth is becoming increasingly common around the World.

Drilling "heat wells" requires a different approach to other, traditional types of drilling, only requiring in many cases to allow the insertion of a pair of HDPE pipes.

### GEOTEC 6

The Geotec 6 is a robust hydraulic rotary top-drive geotechnical site investigation rig The iconic silhouette of the Dando 2000 and capable of a full range of sampling and testing 3000 cable percussion rigs is a feature of techniques including SPT utilizing the attached many civil engineering projects. The 'shell and swing in SPT hammer. The machine is auger' drilling method allows fast, reliable U4 available with high speed and high torque sampling and SPT tests.

0	rotary head options for auger drilling and/or coring. Various mounting options are available including a heavy duty commercial 4 x 4 truck, trailer or customer's own vehicle/structure.
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	MULTITEC 6000
G	Compact, lightweight multipurpose rig for geotechnical drilling. See page 10 for more information.
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### TERRIER

The crawler mounted Dando Terrier Site Investigation Rig is ideal for soil sampling and testing for geotechnical and environmental analysis.

Having the option of both rotary and percussive drilling techniques, the Terrier is effective, versatile and affordable.

### DANDO 2000/3000





## DANDO MULTITEC 6000

This lightweight, high performance 6 ton capacity drilling rig is the ultimate multipurpose drilling machine.

Designed for use across a wide range of drilling applications including water well construction, mineral exploration, geotechnical investigation and geothermal.

The Dando Multitec 6000 is Dando's latest design in compact rig technology incorporating a small foot print with a large and diverse number of drilling options including RC, RAB, conventional mud, auger, diamond wireline drilling and GSHP (Ground Source Heat Pump) drilling.

Features include:

- Track or truck mounted
- Mast dump to 45 degrees
- Arm mounted drilling control
- On board flush pump
- Hydraulic winch
- High-torque high-speed rotary head with hydraulic side shift and tilt
- Hydraulic rod clamps/breaker





## DANDO MULE ATV-5RC

The Dando Mule ATV5-RC is a brand new concept from Dando Drilling International. With every drilling and construction operation there is a need to move equipment and materials across rough terrain in a safe and cost effective way.

The design of the machine allows the Mule to be operated from a distance by remote control thus keeping the operator safe. The removal of the operator from within the vehicle also makes for a much lighter machine as well as an increased pay load capacity - the machine is available in 3 ton or 5 ton load capacity.

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The highly manoeuvrable and agile crawler carrier comes with various track options including steel and rubber tracks and is self loading/unloading with a demountable load bed which comes in either a standard length of 3 metres or extended at 3.6 metres. Finally, the compact design of the machine allows it to fit into a standard shipping container making it easy for transportation.



MK 1000 twin piston motor arrangement



MK 500 single gear motor arrangement



MK500 twin piston motor arrangement

# **OFFSHORE MARINE GEOTECHNICAL INVESTIGATION**

around the world.

The relationship which we have with our clients and our understanding of their needs has allowed our design team to create both models in exact accordance to the industry's highest expectations. This, combined with traditional British ideals of heavy duty, hard-wearing components explains why the MK 500 and MK 1000 power swivel is preferred by Geo-marine companies globally.

The Dando rotary heads hold a longstanding reputation as being the favoured choice for many of the largest drilling companies

In addition to this, our experience in manufacturing and the industry means we can quote and supply suitable water swivels, control panels and other equipment which may be needed for our clients bespoke rig designs. We are also able to recommend specific gear arrangements and associated flow and pressure details to ensure the correct torque and rpm is achieved.

### MK 1000 POWER SWIVEL

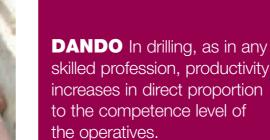
This model is fitted with a twin worm and single wheel gear totally enclosed in an oil bath case. Again, the head incorporates a 150mm I.D. hollow spindle which is mounted on taper roller bearings but the MK 1000 is powered by twin piston motors providing controlled rotation and torque in forward or reverse. The loading capacity is also much greater at 40+ ton.

### MK 500 ROTARY HEAD

Fitted with a worm and wheel gear totally enclosed in an oil bath case, the Dando MK 500 incorporates a 150mm I.D. hollow spindle mounted on taper roller bearings. The head can then be powered by a single piston motor providing controlled rotation and torque in forward or reverse.

**DANDO** As well as long history of manufacturing tools and drill string components, we are constantly recruiting new suppliers of quality drilling products that we offer to our global customer base at highly competitive prices.



















## DANDO - TOOLS & CONSUMABLES

As a truly global player, Dando are the equipment supplier of choice for drilling operations large and small. We are able to offer consumables and tools for all land based drilling operations.

### DESTROYER

Destroyer is Dando's own brand of coring tools. All Destroyer pieces are the best quality products for the best possible prices. Dando also provide equipment from other leading suppliers and will always be able to offer the most suitable product for the job.

### Dando products available include:

- Fluids, chemicals, additives and polymers
- 'Destroyer' diamond Coring and non-coring bits
- All sizes and grades of core barrels and coring equipment
- Rock Bits and Drag Bits
- Rods
- Casing
- SPT and other SI equipment
- Drive sampling equipment
- Mud management equipment
- Cable Percussion Tools and Equipment

# DANDO AND TRAINING

To realise the full potential of any drilling equipment, the training of personnel is of the utmost importance.

Dando's team of highly experienced drillers can provide on-site training and familiarisation with all aspects of any new rig. Topics covered may include:

- rig and tooling maintenance
- borehole planning and design bit selection
- working practices

- consumables use and logistics
- drilling theory and geological factors

Training can be offered directly to key staff on the ground either on-rig or in a class-room setting.

equipment selection and mobilisation