

THE EXPERTS IN GROUND SOURCE  
**GEOTHERMAL DRILLING**

A large, stylized blue graphic on the left side of the page, composed of several downward-pointing chevrons of varying sizes, creating a sense of depth and movement.

THE GTD  
**OPAL  
DRILLING  
PACKAGE**  
2023

# DRILLING PACKAGES

RECORD BREAKING PERFORMANCE

## » WHY BUY A COMPLETE PACKAGE?

- IT'S EVERYTHING YOU NEED - WHETHER YOU ARE A START-UP, EXPANDING OR DIVERSIFYING
- METICULOUSLY ENGINEERED AND SPECIFIED TO WORK TOGETHER
- THE MOST AFFORDABLE WAY TO BUY EQUIPMENT
- A SINGLE FINANCE PACKAGE
- ONE DELIVERY DATE
- REDUCED RISK (FINANCIALLY, NON-COMPATIBILITY AND TO PRODUCTIVITY)

Leverage our decades of experience as experts in geothermal ground source drilling when specifying the most relevant package for your needs.

Our packages aren't just about equipment sales, we provide consultation, training, support (pre and post purchase) along with a complete ecosystem of supplies and consumables.

We can even provide qualified access to drilling contracts as part of the wider GTD Drillers Co-operative

# OUR COMPLETE DRILLING PACKAGES ARE UNIQUE TO THE INDUSTRY



# THE EXPERTS IN GROUND SOURCE GEO THERMAL DRILLING

SCAN QR CODE  
BELOW TO  
ACCESS OUR  
LATEST FULL  
BROCHURE



QR CODE / GTDBROCHURE

CONTACT US FOR FULL SPECIFICATION SHEETS:  
E: [INFO@GTD-DRILLING.COM](mailto:INFO@GTD-DRILLING.COM)

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## ➤ GROWTH OPPORTUNITIES IN GROUND SOURCE DRILLING

### LOOKING TO IMPROVE, EXPAND OR SET UP A NEW GROUND SOURCE DRILLING OPERATION?

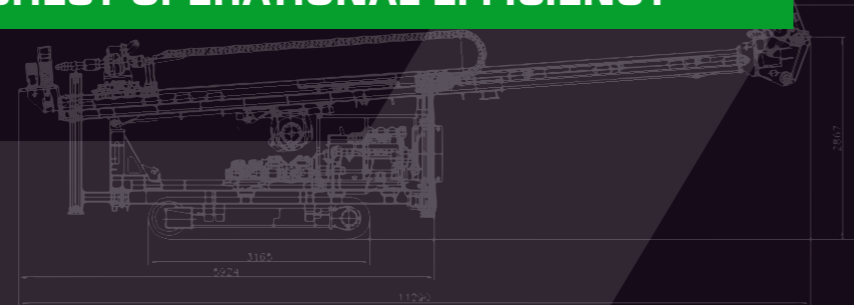
The demand for Ground Source Heating and Cooling (GSHC) drilling specialists is growing exponentially. Sources indicate that the sector is currently operating at under 1% of the potential market share.

Local and International Government Net Zero Carbon targets, combined with significant legislation changes, are creating expansion opportunities and accelerating demand way beyond the capacity of the current number of operational rigs.



**GTD'S EQUIPMENT IS DESIGNED SPECIFICALLY FOR THE GROUND SOURCE GEOTHERMAL DRILLING INDUSTRY ALLOWING THE HIGHEST OPERATIONAL EFFICIENCY**

There is a seismic shift in the climate conscience of the public, planners and politicians. Ground Source geothermal drilling is on the right side of the argument and will continue to grow traction as the cleanest, greenest and most sustainable energy source for 'Climate Control' in every sense of the word! (Greta you can borrow that line if you fancy!)



## ➤ ABOUT GTD AND THE OPAL DRILLING PACKAGE

Projects are getting bigger and boreholes are getting deeper, with this in mind each component you'll find in this brochure has been carefully considered, designed and developed to reduce strain on your equipment and your personnel whilst increasing productivity.

One of the most significant barriers to ground source geothermal systems has historically been the cost of installation. Let's be honest; it still is - but doesn't have to be! GTD can drill down your costs for ground source geothermal operations, improving profits, scalability and competitive opportunities.

Whether you are an established business wanting to expand your capabilities, capacity and productivity or looking to explore the prospect of a new start-up operation, GTD is here to help you with access to a complete ecosystem of equipment, supplies and support.

### WHY BUY GTD EQUIPMENT?

GTD equipment is designed & engineered by geothermal ground source drillers and engineers specifically for the industry.

Each individual component has been specified to work together as a complete balanced drilling system, fine-tuned for optimum drilling potential - after all productivity is king.

### WHO ARE GTD?

GTD are unique as we are dedicated manufacturers & suppliers of ground source geothermal drilling equipment, but also operators who have a vast experience in UK & European ground source drilling as well as more recent operations in North America, Africa & Asia. We understand the balance required between cost and capability, to ensure that you have the right equipment ...at the right price ...right now.

### GTD OPAL PACKAGE:

- GTD DESCO 5500R Geothermal Drill Rig
- GTD Mud Guzzler SC1200-2 - shaker & hydrocyclones
- 36 x 15'' (4.5m) BR50 thread drill rods
- Casing - 18 x 7½' (2.25m) & Racking
- GTD LR1 Double wheel loop reeler
- PFT Grouter
- Ifor Willams/ Big Tex Trailer
- Pramac GBW22P Generator
- Starter pack of drill bits and tooling
- Extensive spares and consumables package



## ➔ GTD OPAL PACKAGE ➔ GTD DESCO 5500R DRILL RIG

### GTD DESCO 5500R DRILL RIG

The GTD DESCO 5500R is our compact model and capable of both domestic and commercial drilling. It can drill beyond 650' (200m) in all conditions with ease and can perform both mud or air drilling.

This model also features our unique rod rack and automated handling system which performs safely and efficiently, increasing productivity whilst reducing manual handling and risk of injury. It can hold 600' (180m) rods (BR50 thread, 15' (4.5m) long with heavy duty wall thickness).

It is fitted with the powerful, world-renowned Doosan DL06 engine, producing 200HP which is ultra reliable and very economical & fuel efficient to run.

It comes complete with a Triplex piston mist pump & twin stage centrifugal mud pump capable of drilling down beyond 650' (200m), lifting dense geology with ease.

DIMENSIONS & WEIGHT	
Length-transport	30' (9.2M)
Width	7½' (2.3M)
Height-transport	8½' (2.6M)
Weight	32,000 lbs (14.5 ton)
ENGINE	
Model	Doosan DL06
Rated power	200HP (141.2kW)
Fuel capacity	66 gal (300L)
DRILL HEAD & ROTATION	
Rotary head with side shift	
Swivel & Shock Absorber Ø60mm	
Twin speed / Twin torque	
High gear	1st : 0-180rpm
Low gear	2nd : 0-90rpm
FEED SYSTEM	
Head travel	18' (6.5M)
Pull-up capacity	26,000 lbs (11 ton)
Pull-down capacity	13,000 lbs (6 ton)

WORKING TABLE & HYDRAULIC CLAMP	
Double Clamps - one rotating	
Max. diameter	12" (304mm)
DRILL PIPE & CASING	
Drill pipe length	3½" (89mm) X 15' (4.5M)
Max. diameter	12" (304mm)
WINCH	
Winch	65' (20M) / 11000 lbs (5000kg)
CRAWLER BASE	
Crawler model	Doosan Solar 55
Crawler type	Steel type with rubber pads
Crawler speed	2.5mph (4 km/h)
ROD RACK & FEEDER	
Integrated Rod Rack Handling & Feeder System	3½" (89mm) x 15' (4.5m) x 40 rods (BR50 thread) 600' (180m) capacity

- 200 HP
- 26,000 LBS (11 TON) PULL BACK
- 13,000 LBS (6 TON) PUSH DOWN
- DOUBLE CLAMPS
- 40 X 15' (4.5M) RODS
- AUTOMATED ROD HANDLING
- CENTRIFUGAL MUD PUMP
- TRIPLEX PISTON MIST PUMP
- WIRELESS REMOTE CONTROL
- WINCH
- BREAKOUT CHAIN WRENCH
- SAFETY CAGE
- ADJUSTABLE WORKING TABLE +6' / -3' (+2M / -1M)
- CASING EXTRACTOR/ INSTALLER EXTRA PUSH DOWN AND PULL BACK
- PRESSURE WASHER & REEL



**RED RIG? OR GO GREEN!**

## ➔ GTD DESCO DRILL RIG

### WHY A GTD DESCO DRILLING RIG?

The answer is simple... productivity!

Our rigs drill down your costs, both in purchase price and increased productivity. How? By outperforming other manufacturers currently used in the ground source geothermal industry. A bold statement, but one that is backed up by fact and experience.

These rigs hold international performance records for the most distance drilled, both on a single day, week and over the course of a year. Scan the QR code and see the GTD Desco Rig breaking records in Holland.

The long rod length, automated handling system and powerful engine means they are fast and capable. It is purposefully designed to simplify its operation, maintenance and fixes. The net result is less downtime and higher productivity.



🏠 **SCAN TO WATCH AN INTERNATIONAL GTD CUSTOMER BREAKING RECORDS IN HOLLAND**



**SCAN TO WATCH A GTD DESCO DRILL RIG BREAKING RECORDS**



**175<sub>M</sub>**  
(574FT)  
**BOREHOLE DRILLED IN 54 MINS**

**RECORD BREAKING PERFORMANCE**



**4130<sub>M</sub>**  
(13,550FT)  
DRILLED, LOOPS INSTALLED & GROUTED  
**IN ONE WEEK WITH ONE RIG**



**DON'T BASE YOUR DECISION ON SPECS ALONE, COME & SEE THE RIG IN ACTION...**

**GET IN TOUCH AT INFO@GTD-DRILLING.COM**

# ➔ GTD DESCO DRILL RIG FEATURES & OPTIONS



**ADJUSTABLE TABLE HEIGHT**

**+6' / -3'**  
(+2M / -1M)

**CAN BE USED AS A CASING EXTRACTOR** (GIVING EXTRA PULL BACK)

**ADJUSTABLE HEAD SLIDES**

**ROD HANDLING WITH DUAL CONTROLS**

**AUTOMATED ROD RACK SYSTEM**

**CAN BE OPERATED BY THE LEAD DRILLER, SECOND MAN OR BOTH**

**TRIPLE CLAMPS**  
**2 FIXED & 1 ROTATING**  
**12 1/2' (320MM) OPENING**

**HYDRAULIC CHAIN WRENCH & TABLE SPANNER**

**STEEL TRACKS WITH RUBBER PADS**

**REMOTE CONTROL**

**HYDRAULIC LEGS TO LIFT, STABILIZE & LEVEL THE RIG**

# ➔ GTD DESCO DRILL RIG FEATURES & OPTIONS



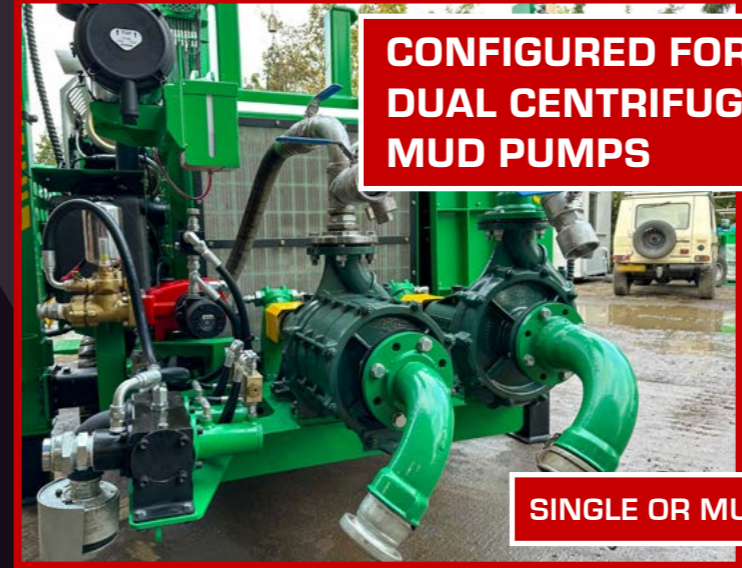
**SWITCHABLE & ADJUSTABLE HIGH / LOW ROTATION & TORQUE**



**EURO DRILL HEAD**



**MAIN WINCH & SANDLINE WINCH**



**CONFIGURED FOR DUAL CENTRIFUGAL MUD PUMPS**



**SINGLE OR MULTI STAGE**

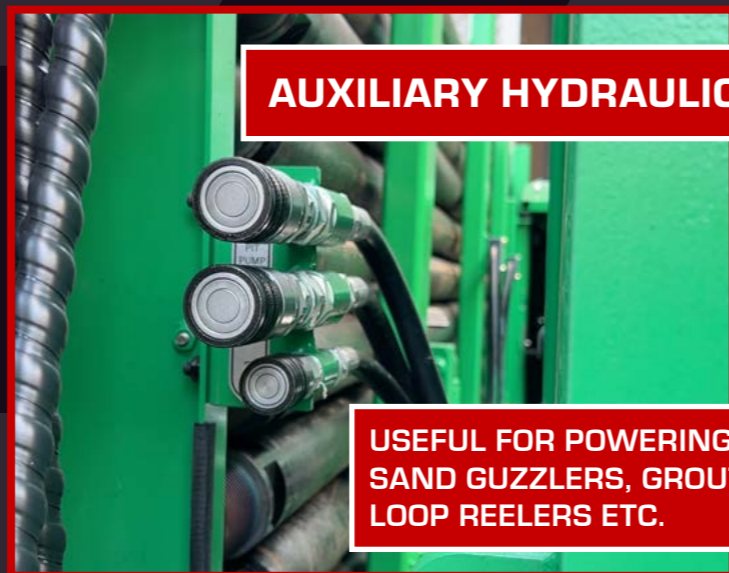


**DUPLEX HIGH PRESSURE PISTON PUMP OPTIONS**

**WELDER & GENERATOR**



**AUXILIARY HYDRAULICS**



**USEFUL FOR POWERING SAND GUZZLERS, GROUTERS, LOOP REELERS ETC.**

**MIST PUMP FOR AIR DRILLING & PRESSURE WASHER**



**SCAN TO WATCH A VIDEO SHOWCASING ALL THESE GTD DESCO FEATURES AND OPTIONS**



## ➔ GTD OPAL PACKAGE ➔ GTD MUD GUZZLER

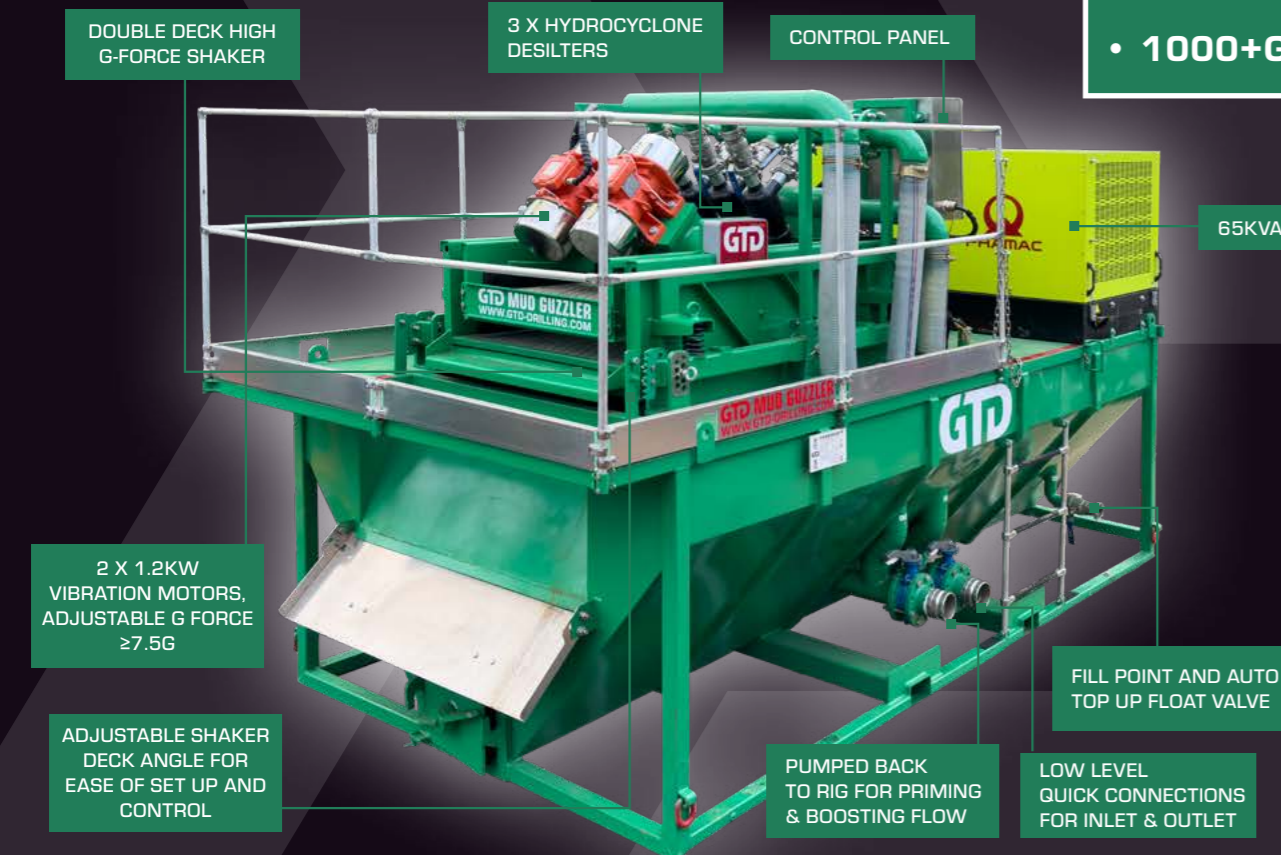


### GTD SC1200-2 DRILLING FLUID RECYCLING SYSTEM

Mud Recycling equipment is essential to the drilling operation and is a key component, increasing productivity.

We have designed and engineered the GTD SC1200-2 system to work perfectly with the GTD DESCO 5500R geothermal rig.

- 200 GPM (45M<sup>3</sup>/H) CAPACITY
- HIGH G FORCE DOUBLE DECK SHALE SHAKER
- 3 X HYDROCYCLONE DESILTERS
- SUBMERSIBLE FEED PUMP
- TANK AGITATORS
- 1000+GAL (4700 LITRE) TANK



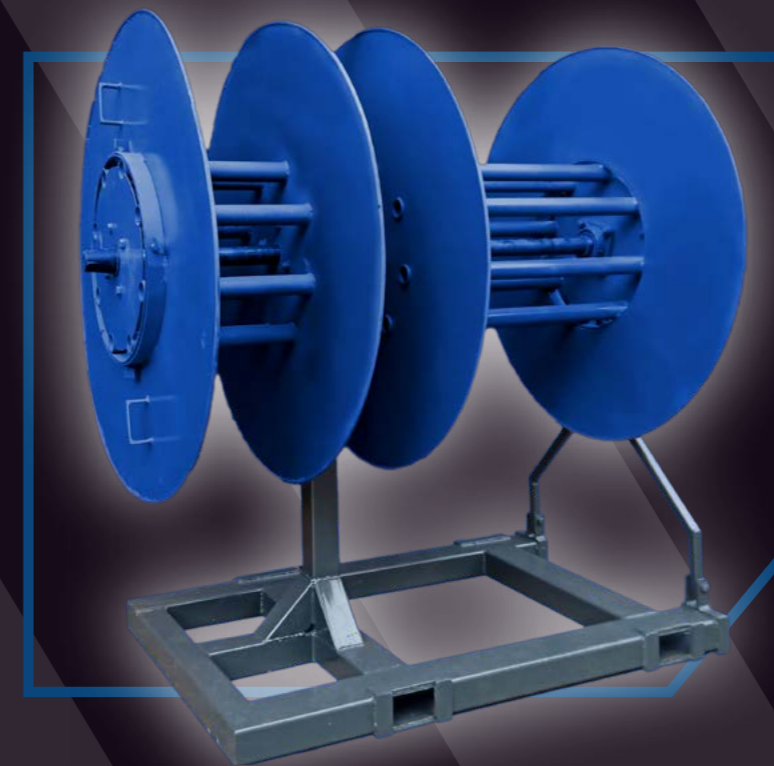
### KEY BENEFITS

- Removes low gravity solids for greater drilling efficiency
- Reduces water, mud, transportation and mud disposal costs
- Increases water storage capacity
- Reduces site footprint, site remediation and environmental management costs
- Improves on-site health and safety, reducing slips and hazards due to mess, mud and water
- Easy to transport "single unit" package

## ➔ GTD OPAL PACKAGE ➔ GTD LR1 LOOP REELER

A LOOP REELER CAN OFTEN BE OVERLOOKED...

...But it is an important part of an efficient operation. It is a false economy to make do without one if you are truly committed to drilling down your costs.



Friction is a huge source of frustration and is a drag on manpower, efficiency and safety. A loop reeler can be the make or-break element of whether the install goes to depth.

A proper smooth running reeler can reduce the amount of weight required to counter act the buoyancy of the loop, saving money. Smooth consistent unreeling of the loop means the risk of damage and stoppage is reduced. Quick, controlled unreeling saves time and manpower energy. Allowing you to move onto the next hole and set up for the next days drilling.

The Opal package loop reeler is built to last. Its robust design means it will put up with the every day strains of a drill site. Reinforced fork holes on all 4 sides enables lifting from any angle and easy positioning over the borehole.

Ball bearings on the drums ensure super smooth unreeling and the solid sides ensure the loop is contained and eliminates the risk of getting limbs caught in the rotating parts or loops popping out the side and kinking.



## ➔ GTD OPAL PACKAGE ➔ GROUTER

### MAKE LIFE EASY WITH A GEOTHERMAL GROUTER

This grouter is a continuously operating mixing pump for ready-mixed dry grout. There is no need to mix sand, bentonite and water. Simply add dry bags of premix, either 55 lbs (25kg) or 2200 lbs (1000kg) bulk bags, straight into the hopper, and the G4 does the rest!

Easy, quick and efficient. At the push of a button, ready-mixed dry grout is automatically fed into the mixing pump, minimising dust too. It is then mixed with water and pumped down the borehole.

It's compact, easy-to-transport and offers a high delivery rate and large delivery range. The low filling height is ideally suited for filling by hand or bulk bags hung above.

Powered electrically, it can be run off the generator included in the package.



## ➔ GTD OPAL PACKAGE ➔ TRAILER & GENERATOR

### TRAILER – IFOR WILLIAMS / BIG TEX

A trailer is an essential part of the drilling operation, so we have included the very best.

The Ifor William or Big Tex flat bed are ultra-strong, robust and versatile. They have been picked specifically to work in conjunction with the Mud Recycling unit.

The system, including the generator, can be transported on the trailer and remain under the weight limit permitted. Additional stabilisation legs/supports have been added to all four corners, to allow the system to be used whilst mounted on the trailer.



IFOR WILLIAMS / BIG TEX TRAILER

### GENERATOR – PARAMAC GBW22

#### 20 KVA THREE PHASE SILENT DIESEL GENERATOR

Standby: 22 kVA / 17.6 kW  
Prime: 20 kVA / 16 kW  
Engine: UK Built Perkins 40AD-22G  
Alternator: Mecc Alte ECP28-M4 C  
Voltage: 400V  
Frequency: 50Hz  
Amps Per Phase: 31.7  
Control Panel: ComAp



Having your own power supply on-site has huge advantages regarding self-sufficiency. This reduces the risk of delays, potentially waiting on others, and helps productivity!

The generator is designed to be mounted on the deck of the mud recycling unit, powering its systems. It also has an additional connection points for powering other on-site equipment such as sump pumps, etc.

## ➤➤ GTD OPAL PACKAGE ➤➤ STARTER PACK & SPARES

### WE'LL GET YOU DRILLING AND KEEP YOU DRILLING

So that downtime is kept to a minimum and productivity is at the maximum, we provide a HUGE spares parts package to go with the set-up.

We also supply a starter pack of tooling, which includes a large selection of drill bits, subs & saver subs.

GTD OPAL - TOOLING STARTER PACK	
UNITS	PART DESCRIPTION
2	5 1/8" - 4 WING STEPPED PDC
2	5 5/8" - 4 WING STEPPED PDC
2	5 1/8" - 3 WING ROUNDED PDC
2	5 5/8" - 3 WING ROUNDED PDC
1	5 1/8" - ROCK ROLLER
1	5 5/8" - ROCK ROLLER
1	SUB 3 1/2" IF BOX - BR50 PIN
1	SUB BR50 BOX - 2 7/8" REG BOX
1	SUB BR50 BOX - 2 3/8" IF BOX
1	SUB BR50 BOX - BR50 BOX
1	CHAIN WRENCH SPANNER



GTD ALSO STOCKS AN EXTENSIVE RANGE OF OUR EXCLUSIVE PINK PENETRATOR DRILL BITS AND A COMPLETE ECOSYSTEM OF CONSUMABLES

## ➤➤ GTD OPAL PACKAGE ➤➤ STARTER PACK & SPARES

### SPARES & CONSUMABLES

A HUGE SELECTION OF SPARES THAT WILL ENABLE YOU TO SERVICE EQUIPMENT UP TO 3 YEARS (BASED ON RECOMMENDED 500HR SERVICES)



Included tablet computer with full factory Doosan Licenced diagnostic program

# IN THE PRESS

## GTD DESCO DRILL RIG, COVER STORY OF THE GEODRILLING INTERNATIONAL MAGAZINE

READ ALL ABOUT IT IN THE FULL ARTICLE PUBLISHED IN DEC 2021 - SCAN QR CODE



← SCAN THE QR CODE TO READ THE FULL ARTICLE

## » WHAT SOME OF OUR GLOBAL CUSTOMERS ARE SAYING

**“MEGA RIG – DOES EXACTLY WHAT IT SAYS ON THE TIN”**  
ACE DRILLING SERVICES (UK)

**“I CAN NOW SEE WHY THIS RIG HAS **BROKEN SO MANY RECORDS IN EUROPE.** THE ROD HANDLER IS A DREAM!”**  
QC GEOTHERMAL (USA)

**“GTD EQUIPMENT HAVE ENABLED US TO SET **NEW STANDARDS IN PRODUCTIVITY** NEVER ACHIEVABLE BEFORE!”**  
GEOTECH BV (HOLLAND)

**“IF YOU ARE DIVERSIFYING INTO GEOTHERMAL DRILLING LIKE US, **GTD REALLY ARE THE ONLY CHOICE.** THEY CONTINUE TO **SUPPORT US ALL THE WAY**”**  
FUTURE DRILLING SERVICES (UK)

**“THE TRACKED MUD UNIT IS AN **ABSOLUTE GAME CHANGER**”**  
AW SYNERGY (UK)

**“THE 6500R MAKES **LIGHT WORK OF THE CHANGING & CHALLENGING GEOLOGY** ACROSS FRANCE”**  
SYNERGIE FORAGE (FRANCE)

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WINTER 2022