



GT SERIES

GTD GT45

GEOTHERMAL & WATER WELL DRILL RIG

SPEC SHEET

WWW.GTD-DESCO.COM

GTD GT45 DRILL RIG

The **GT series of drill rigs** are known for their **high productivity** and **reliability** in geothermal drilling, with **proven performance** in both domestic and commercial applications around the world. These rigs are the **number one choice** for **leading industry professionals**, thanks to their **versatility** and ability to handle a variety of drilling conditions with **precision** and **efficiency**.

The **GT45** model is ideal for drilling 800ft - 1000ft boreholes productively using **mud, air, and hammer** drilling methods. It is equipped with our unique **rod rack and loading system**, which is the most **robust, reliable, and safest rod handling system** on the market, ensuring **maximum safety** and **efficiency** in all drilling operations.

FIELD-PROVEN UPTIME AND PERFORMANCE, BACKED BY CUSTOMER RESULTS

46,000 LBS
PULL - BACK

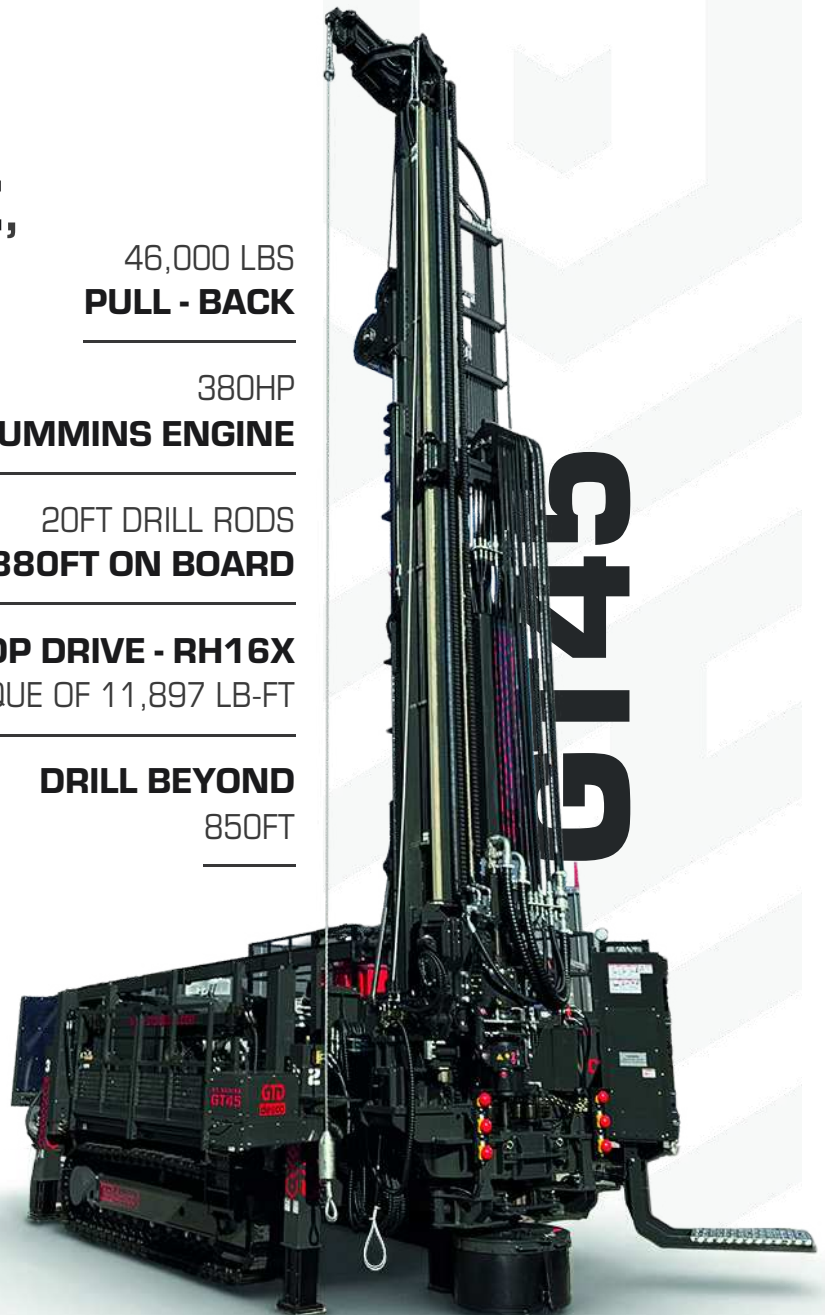
380HP
CUMMINS ENGINE

20FT DRILL RODS
880FT ON BOARD

EURODRILL TOP DRIVE - RH16X
TORQUE OF 11,897 LB-FT

DRILL BEYOND
850FT

DRILL DEEPER AND FASTER WITH MINIMAL COMPROMISE



DIMENSIONS & WEIGHT

- ▶ Length 38' 8" (11.79m)
- ▶ Width 7' 10" (2.39m)
- ▶ Height 11' 2" (3.4m)
- ▶ Weight 57,320 lbs - 70,550 lbs
(26,000 kg - 32,000 kg)
Actual weight will vary depending on the options selected and installed, e.g. Rods...

DERRICK & FEED SYSTEM

- ▶ 46,300 lbs (21,000 kg) pull-back
- ▶ 17,640 lbs (8,000 kg) push-down
- ▶ 24' 7" (7.5 m) top head stroke

DRILL PIPE & CASING

- ▶ 3½" (88.9 mm) x 20' (6 m)
44 rod capacity - 880' (264 m)
- ▶ 3 ¾" (95 mm) x 20' (6 m)
36 rod capacity - 720' (or 216 m)
- ▶ Max diameter 12½" (320 mm)

ENGINE

- ▶ Cummins L9 (Stage 5)
380 hp (283 kW)
- ▶ Typical engine speed - 1400 rpm - 1600 rpm
- ▶ Max engine speed - 1800 rpm

ROTARY DRILL HEAD - RH16X

- ▶ Swivel with 2 -1/2 thru-hole
202rpm at 3,717 lb-ft (5.04 kNm)
- ▶ 63rpm at 11,897 lb-ft (16.13 kNm)
- ▶ Chuck and Floating Head

CRAWLER (TRACK) BASE

- ▶ Doosan Solar 130
- ▶ Steel with rubber pads
- ▶ Wireless remote travel

GTD STANDARD FEATURES

- ▶ Sideshift - Sliding Drill Head
- ▶ Swivel & Floating Spindle Sub
- ▶ Height adjustable working table
- ▶ Double Clamps - One rotating
- ▶ Hydraulic Centralizing Rollers
- ▶ Hydraulic Breakout Chain Wrench
- ▶ Auxiliary Hydraulic Ports and Controls
- ▶ Main Winch - 11,000 lbs (5,000 kg)
- ▶ Wire/Sandline Winch
- ▶ Water Injection Mist Pump
- ▶ DTH Lube System
- ▶ Rod Rack & Rod Loader
- ▶ Self Loading Jacks/ Outriggers
- ▶ Air Compressor: 24 cfm (673 lpm),
130 psi (9 bar)
- ▶ Centrifugal Pump: 4x3x13 Single-stage
- ▶ 5x6 Triplex Piston Pump: 317 gpm @ 580 psi
(1200 lpm @ 40 bar)
- ▶ Hydraulic Welder & Generator (7.5 kW)
- ▶ Tablet Computer & Engine Diagnostics
Software

OPTIONS

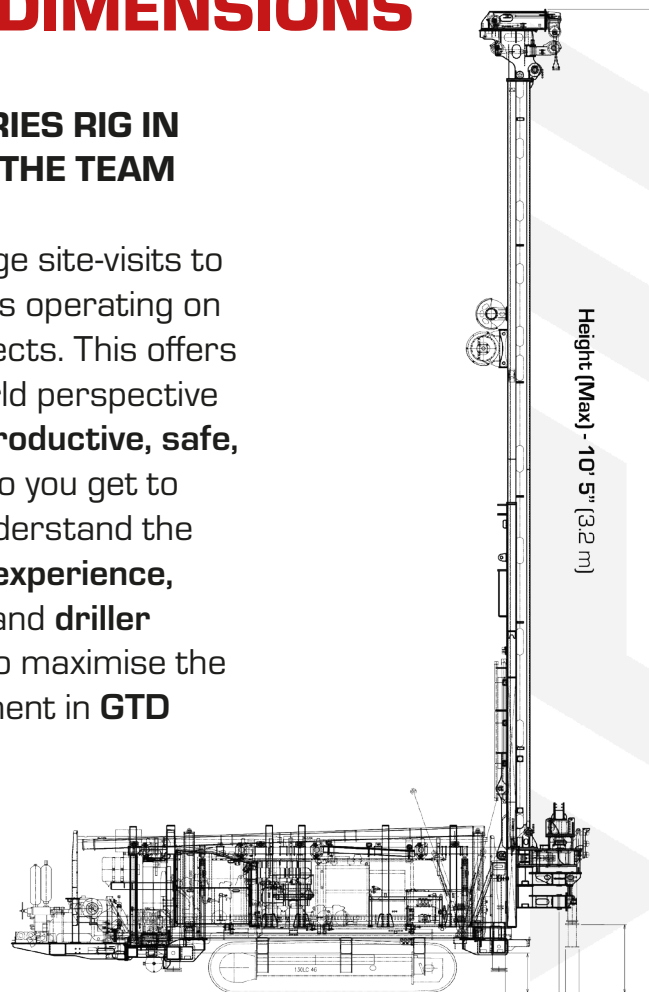
- ☐ Hydraulic Sliding Rod Wrench
- ☐ Angled Drilling
- ☐ Triple Clamps
- ☐ Safety Cage
- ☐ Sandline Winch Length 1,000' - 6,500'
(300 m - 2,000 m)
- ☐ Head 30° Angled Tip Out System



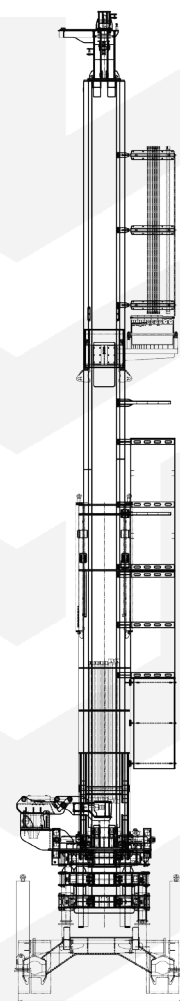
GTD GT45 DIMENSIONS

COME SEE A GT SERIES RIG IN ACTION AND MEET THE TEAM

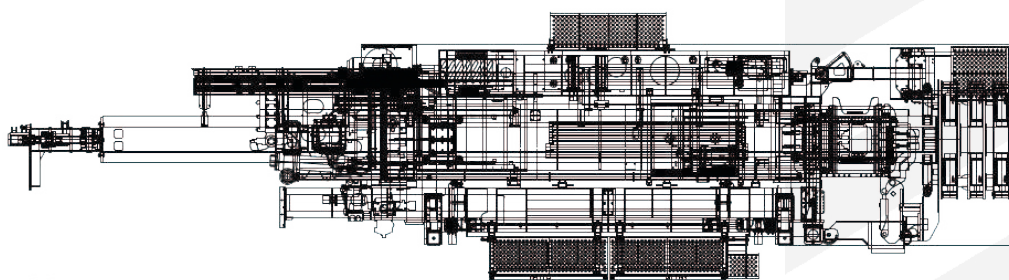
We strongly encourage site-visits to see our **GT Series** rigs operating on 'live' commercial projects. This offers an authentic, real-world perspective on why our rigs are **productive, safe,** and **user-friendly**. Also you get to **meet the team** to understand the additional value their **experience, abundance attitude** and **driller focused knowledge** to maximise the return on any investment in **GTD desco** equipment.



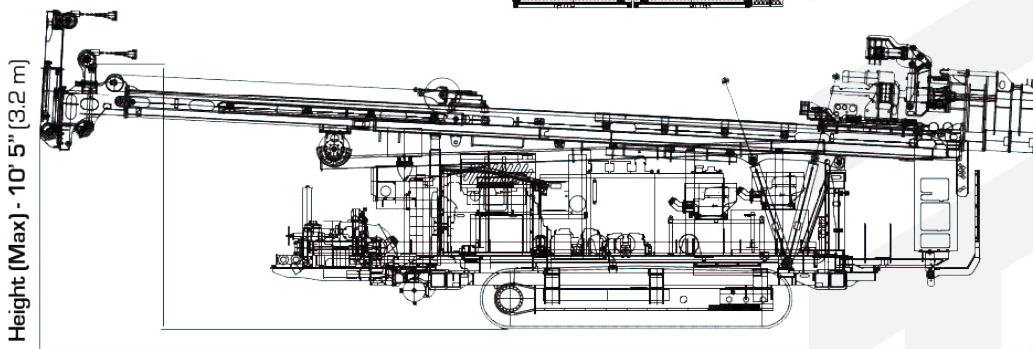
Length (Max) - 38' 7" (12.5 m)



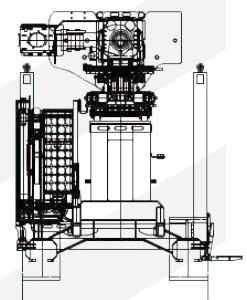
Width (Max) - 7' 11" (2.4 m)



W (Max) - 7' 11" (2.5 m)



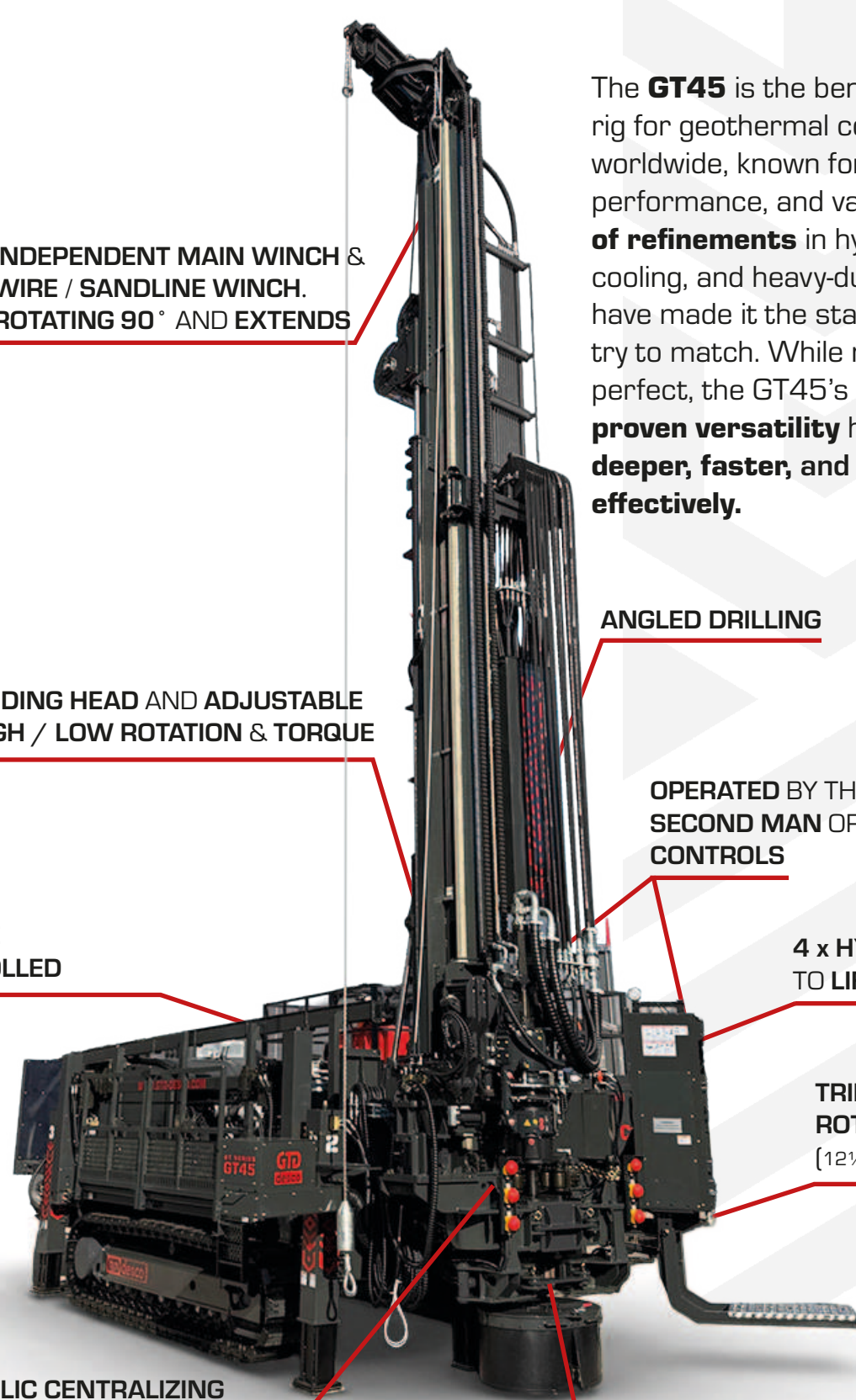
Length (Max) - 38' 7" (12.5 m)



W (Max) - 7' 11" (2.5 m)

NOTE: THE MEASUREMENTS ABOVE ARE THE BASE DIMENSIONS WHICH MAY BE SUBJECT TO VARIATION DEPENDENT ON FINAL DESIGN SPECIFICATIONS. SPECIFICATIONS SHOWN ARE ONLY INDICATIVE AND SUBJECTED TO CHANGE WITHOUT PRIOR NOTICE

GTD GT45 CORE FEATURES

A detailed view of the GTD GT45 geothermal drilling rig. It is a large, black, industrial machine with a long, vertical mast. The mast is equipped with various hydraulic components, including a main winch and a sandline winch. The rig is mounted on a base with four hydraulic legs. The base also features a working table and various clamps. The rig is shown in a studio setting with a white background.

INDEPENDENT MAIN WINCH &
WIRE / SANDLINE WINCH.
ROTATING 90° AND EXTENDS

The **GT45** is the benchmark rig for geothermal contractors worldwide, known for its reliability, performance, and value. **Decades of refinements** in hydraulics, cooling, and heavy-duty components have made it the standard others try to match. While no rig is perfect, the GT45's **durability** and **proven versatility** help fleets **drill deeper, faster, and more cost-effectively**.

SLIDING HEAD AND ADJUSTABLE
HIGH / LOW ROTATION & TORQUE

ANGLED DRILLING

OPERATED BY THE LEAD DRILLER,
SECOND MAN OR BOTH ON DUAL
CONTROLS

REMOTE
CONTROLLED

4 x HYDRAULIC LEGS
TO LIFT AND LEVEL

TRIPLE CLAMPS, 1
ROTATING & 2 FIXED
(12½" (320MM) OPENING)

HYDRAULIC CENTRALIZING
ROLLERS, SLIDING ROD
WRENCH & CHAIN WRENCH

HEIGHT ADJUSTABLE WORKING TABLE,
CAN BE USED AS A **CASING EXTRACTOR**

GTD GT45 ADDITIONAL INFO

HYDRAULIC WELDER

Ideal for welding casing and for on-site power and welding requirements.

HYDRAULIC SLIDING ROD & WRENCH

Used if you are not confident with clamps and are worried about dropping rods.

ANGLED DRILLING

Drill up to 45° angles. As standard 20 degrees is achievable, but for greater angles we recommend moving the table travel. Keeps the site tidy when not using surface casing and diverter when air drilling.

TRIPLE CLAMPS

Useful if drilling with a lot of casing.

AIR DRILLING SKIRT

Keeps the site tidy when not using surface casing and acts as a diverter when air drilling.

HIGH TORQUE MOTORS & REDUCTION GEARBOX

Upgrade the standard head with high-speed bent-axis motors and a reduction gearbox, giving a 24% increase in torque and increased motor life.

EURODRILL RH16X

With almost double the torque of the standard GTD drill head from a world-renowned manufacturer.

SAFETY CAGE

Meets your country-specific requirements with a safety cage and rotation cut-off.

PUMPS

Centrifugal pump: 4×3×13 single-stage

Mud Puppy 250 or GTD own 4×3×13" heavy-duty chromoly pump
Interchangeable parts between both

Configured for dual mud pumps of your choice:

- Two centrifugal pumps or
- One centrifugal and one piston pump

High-Pressure Piston Pump

- MP1200 5×6 Triplex Piston Pump
- 317 gpm @ 580 psi (1,200 lpm @ 40 bar)

RODS AND CASING

PP52 tapered flush thread delivers maximum flow and joint strength without the limitations of API designs, ensuring full hydraulic performance with leak-free connections.

Premium friction-welded joints with extended, thick transition zones reduce stress concentrations and improve resistance to cyclic fatigue under high torque.



GTDData MONITORING SYSTEM

TURN YOUR DRILL SITE INTO A SMART, CONNECTED SYSTEM WITH GTDData.

With **real-time data** and **remote access**, you can keep your team **informed** and in control — reducing risk, boosting performance, and cutting downtime.

WIRELESS SYNC

Wireless sync keeps your rig, solids control equipment, and data logger in constant communication.

Stay ahead with alerts that predict maintenance and catch anomalies early.

LIVE DATA

Live data puts speed, torque, and fluid control at your fingertips.

Cloud dashboards keep your data within reach, wherever you are.

HOW IT LOOKS



(Live data read-outs positioned right above main drillers controls)

MONITORED PARAMETERS: WHAT YOU CAN SEE

Parameter	Purpose / Insight
RATE OF PENETRATION (ROP)	Tracks drilling progress; alerted drop identifies bit wear
TORQUE	Prevents overloading; flags formation changes or stuck pipe
RPM	Optimizes bit performance and drilling efficiency
MUD PUMP PRESSURE	Ensures hole cleaning, formation stability, avoids stuck pipe
MUD VOLUME / FLOW RATE	Monitors fluid usage; supports environmental compliance
HYDRAULIC OIL TEMPERATURE	Prevents overheating; aligns with GTD's upgraded cooling systems
FUEL CONSUMPTION	Tracks rig efficiency vs. torque/RPM output
WEIGHT ON BIT (WOB)	Refines ROP control; critical for bit and formation optimization
DEPTH & DRILL TIME	Tracks progress; enables per-foot cost/performance KPIs
SYSTEMS DIAGNOSTIC LOG	Includes sensor health, alerts, and error messages

GTD SUPPORT

FULL LIFECYCLE SUPPORT

GTD'S COMMITMENT TO UPTIME DOESN'T END AT DELIVERY – IT BEGINS.

A well-maintained GTD rig delivers strong ROI, safer operations, and longer service intervals, ensuring expert support is always within reach, wherever your operation is based.

KEY SUPPORT FEATURES

- ▶ **Rapid spare parts replenishment** across the **USA**, **Canada**, and the **Rest of the World**.
- ▶ **Remote diagnostics** and **alert configuration** through GTD's **integrated data system**.
- ▶ Multiple **service hubs** and **parts stores** in **New Hampshire (USA)** and **Ontario (Canada)** **Tonbridge (UK)**.
- ▶ **On-site commissioning, training, and inspections** by **GTD North American** and **Global Service Teams**.
- ▶ **Comprehensive service kit** covering the first **2,000+ operating hours**.
- ▶ **Fully bespoke support** and **service packages** and be created to **suit your business needs**.



GTD LOCATIONS

GTD'S GLOBAL SUPPORT HUB NETWORK MEANS WE CAN DELIVER, WHEREVER, WHENEVER...

Multiple strategically located facilities around the world enabling us to respond quickly, mobilise efficiently, and provide seamless support tailored to our customers' needs across regions, time zones, and operational demands.

GTD USA

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SWANZEY,
NH, 03446,
USA

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NORTH YORK,
ON, M6M 2L6,
CANADA

GTD UK - HQ

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PADDOCK WOOD,
TONBRIDGE,
TN12 6PJ
UNITED KINGDOM

GTD SOUTH KOREA

NAM-MYEON,
JEOLLANAM-DO,
SOUTH KOREA

GTD GLOBAL SUPPORT TEAMS

GTD DOESN'T JUST SELL RIGS — WE SUPPORT YOUR FLEET FOR LIFE.

Our North American field teams and global engineering group ensure your rigs stay productive, safe, and efficient year after year.

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GET IN TOUCH NOW TO DISCUSS HOW WE CAN IMPROVE THE EFFICIENCY AND SAFETY OF YOUR DRILLING OPERATION...

For more information, contact us on **INFO@GTD-DESCO.COM**



GT45 SPEC SHEET

WWW.GTD-DESCO.COM