



# GTD GT45

GEO THERMAL & WATER WELL DRILL RIG

**SPEC SHEET**

## 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 11,897LB-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' (or 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

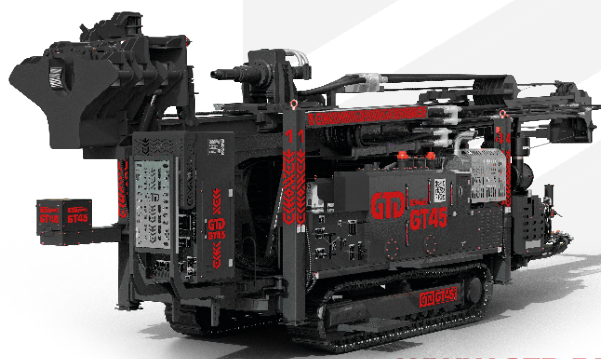
- ▶ Doosan Solar 130
- ▶ Steel with rubber pads
- ▶ Wireless remote travel

## 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

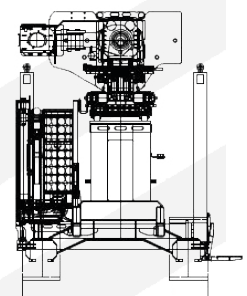
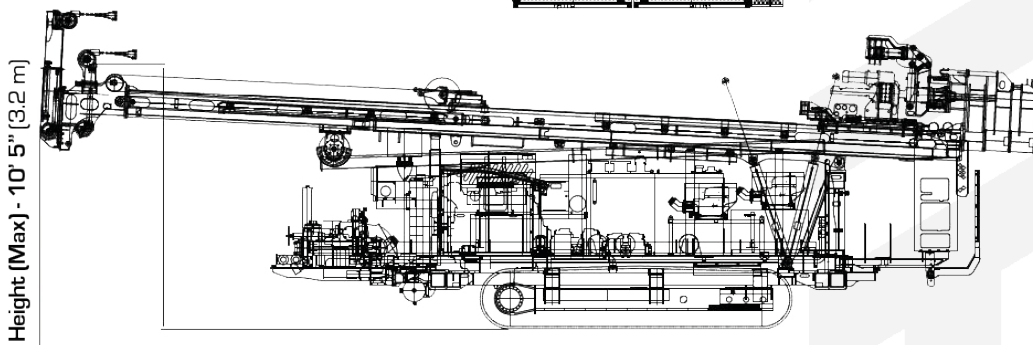
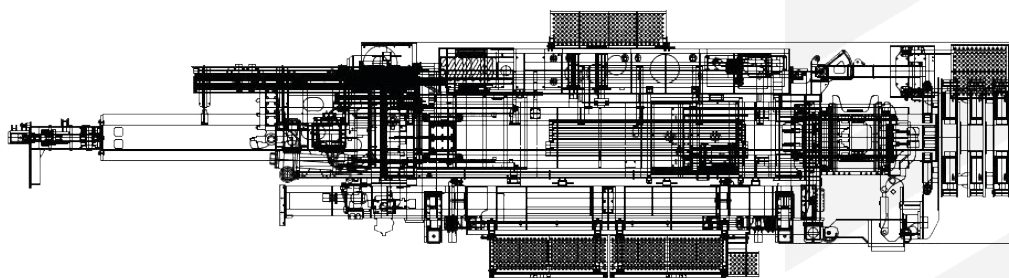
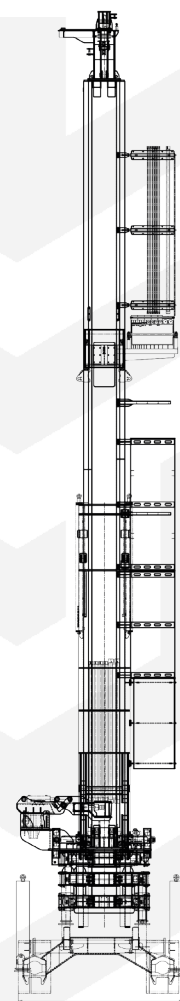
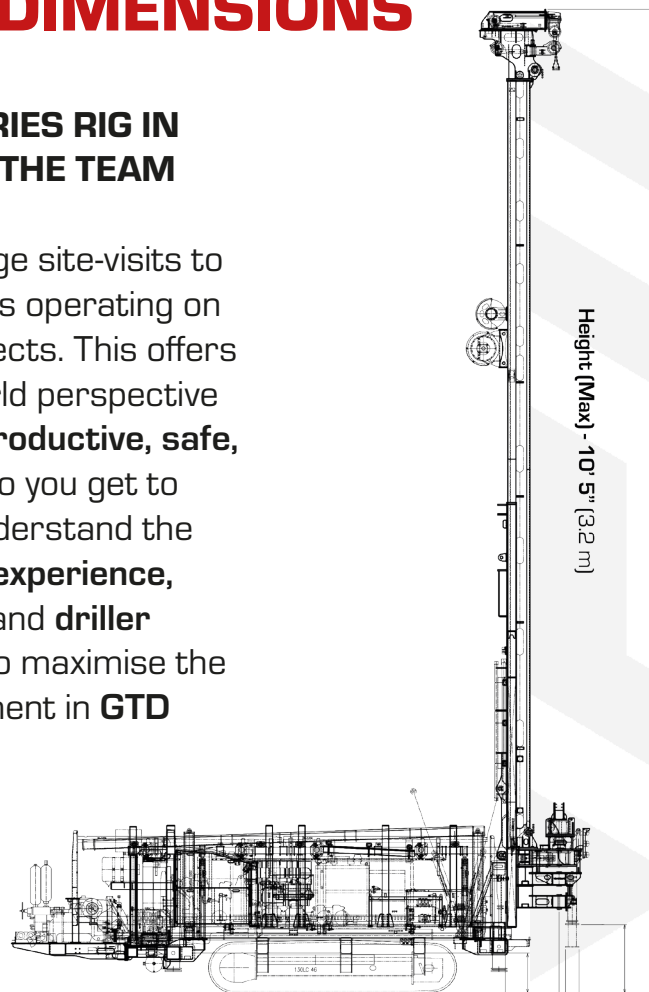
- ☐ Hydraulic Sliding Rod Wrench
- ☐ Angled Drilling
- ☐ Triple Clamps
- ☐ Safety Cage
- ☐ Sandline Winch Length 1,000' - 6,500'  
(300 m - 2,000 m)
- ☐ Head 30° Angled Tip Out System



# GTD GT45 DIMENSIONS

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

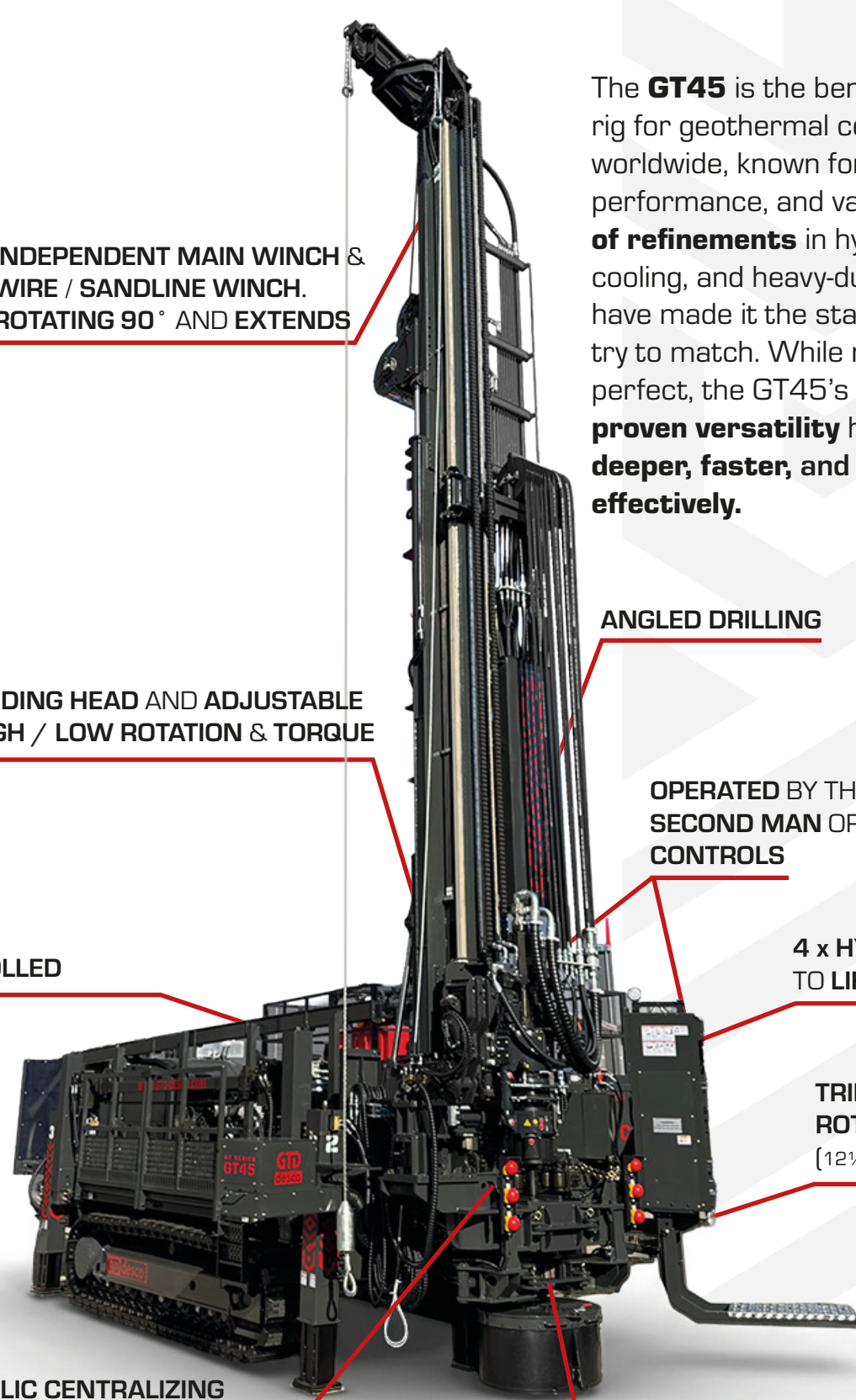
We strongly encourage site-visits to see our **GT Series** rigs operating on 'live' commercial projects. This offers an authentic, real-world perspective on why our rigs are **productive, safe,** and **user-friendly**. Also you get to **meet the team** to understand the additional value their **experience,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



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, tracked machine with a tall, vertical mast. The mast has various components like winches, clamps, and a sliding head. The base of the rig is mounted on a heavy-duty track system. Red lines connect various parts of the rig to descriptive text boxes.

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

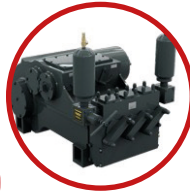
Keeps the site tidy when not using surface casing and acts as a diverter when air drilling.

### 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.

## DATA MONITORING SYSTEM

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

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...

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.

#### GTD USA

75A BIRCH RD,  
SWANZEY,  
NH, 03446,  
USA

#### GTD CANADA

57 INGRAM DR,  
NORTH YORK,  
ON, M6M 2L6,  
CANADA

#### GTD UK - HQ

QUEEN ST,  
PADDOCK WOOD,  
TONBRIDGE,  
TN12 6PJ  
UNITED KINGDOM

#### GTD SOUTH KOREA

NAM-MYEON,  
JEOLLANAM-DO,  
SOUTH KOREA



# GTD SUPPORT

## 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.

### GLOBAL ENGINEERING SUPPORT



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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](http://WWW.GTD-DESCO.COM)