TSI 150CC

TERRA SONIC INTERNATIONAL

27825 State Route 7, Marietta, Ohio 45750 USA
Telephone: 740.374.6608
www.terrasonicinternational.com

TSI 150CC

Compact Crawler-Mounted Sonic Drill Rig



FEATURES

- 250 Engine Horsepower Tier 4 Final Diesel Engine Powers Driving, Drilling, and Accessory Hydraulic Functions
- Standard 20 ft 1-1/2 in (6.39 m) Long Mast; Available 13 ft 6 in (4.1 m) Short Mast
- The Rig has 14 ft 2 in (4.32 m) of Stroke
- Angle Drills Between Vertical and 55°
- Rated Drilling Depth up to 1,000 ft (304.8 M) Depending on Lithology and Casing Design

REV 05/2026 04227

TSI 150CC

TERRA SONIC INTERNATIONAL

27825 State Route 7, Marietta, Ohio 45750 USA
Telephone: 740.374.6608
www.terrasonicinternational.com

TSI 150CC • Compact Crawler-Mounted Sonic Drill Rig

SPECIFICATIONS

SONIC HEAD

- **SONIC Head Model:** TSi 150
- **Oscillator Frequency:** 0 to 150 Hz
- **Oscillator Force:** 50,000 lbf (222 kN)
- **Max Torque (high torque/low speed):** 4,677 ft-lb (6,341 Nm)
- **Rotation Speed (low speed/high torque):** 0 to 62 rpm

TRANSPORT

- **Width:** 7 ft 3 in (2.21 m)
- **Length:** 21 ft 4 in (5.85 m)
- **Height:** 7 ft 9 in (2.2 m)
- **Weight:** 23,995 lbs (10,883 kg)
- **Ground Clearance:** 10-1/2 in (26.7 cm)

MAST

- **Head Travel/Stroke:** 14 ft 2 in (4.32 m)
- **Head Travel Speed:** 0 to 155 ft/min (0 to 47.24 m/min)
- **Overall Height (bottom of tower top of jib boom):** 20 ft 1-1/2 in (6.39 m)
- **Drilling Angle:** Vertical to Nearly Horizontal
- **Upper Jib Boom and Hoist:** 2,000 lb (907 kg) Capacity, 150 ft/min (46 m/min) Bare Drum Speed with 250 ft of Ø 1/4 in Steel Cable
- **Manual Mast:** Lock in Vertical Position
- **Tower Dump:** 30 in (76.2 cm)
- **Feed System:** Hydraulic Operated Utilizing Feed Frame and Leaf Chain Design and Rollers as Conventional Hydraulic Cylinder/Chain Method
- **Hose Carrier:** Mast Integrated Hose Management System with Accessible Bulkheads
- **Work Lights:** LED on Mast and Control Panel
- **Head Tilt:** 87° and Hinges Away from Driller to Enable Jib Over Hole

DECK

- **Driller Platform:** 3 ft (914 mm) L × 2 ft 6 in (762 mm) W with Fold-up Hinge
- **Jack Legs:** Four 3-1/2 in (89 mm) × 24 in (618 mm); Located at Deck Corners with Built-in Lock Valves

RIG PERFORMANCE

- **Rated Drill Depth:** 1,000 ft (304.8 m) Depending on Lithology and Casing Design
- **Max Drilling Diameter:** 12 in (305 mm) Casing
- **Drill Feed Rate:** 0 to 135 ft/min (0 to 41 m/min)
- **Pull Back Force:** 16,800 lbf (74.7 kN)
- **Down Force:** 11,300 lbf (50.3 kN)
- **Max Tooling Length:** 10 ft (3 m)

HYDRAULIC SYSTEM

- **Hydraulic Oil Capacity:** 120 gal (454 L)
- **Hydraulic Cooling System:** 240,000 Btu/hr @ 100 gpm (70.3 kW @ 379 L/min) and 50,000 Btu/hr @ 20 gpm (14.7 kW @ 76 L/min) for SONIC Head Lubrication
- **Variable Displacement Pump:** Load Sense Piston Pumps with Pilot Controlled Valves
- **Pilot Hydraulic Drilling Control**

ENGINE

- **Engine:** John Deere, Model 6068, Diesel, Tier 4 Final
- **Engine Horsepower:** 250 hp (186 kW) @ 2,000 rpm
- **Engine Monitor:** Mounted in Rig Control Panel used to Monitor Engine Parameters
- **Fuel Capacity:** 42 gal (159 L)
- **Auxiliary Air Compressor:** 34 cfm @ 120 psi (57.8 m3/hr @ 8.27 bar)

BREAKOUT WRENCH

- **Top and Bottom Wrenches:** Dual Clamping Cylinders with Lock Valves Incorporated in Hydraulic Circuit
- **Wrench Clamp Force:** Preset at 34,500 lbf (153.4 kN)
- **Breakout Torque:** 30,365 ft-lb (41,169 Nm) with Dual Cylinders
- **Wrench Size Range:** 3 in (76 mm) to 8 in (203 mm) Jaw; 9 in (228.6 mm) to 12 in (305 mm) Jaw
- **Wrench Travel:** 19° Swing
- **Hardened Teeth Inserts:** Replaceable

WATER/MUD SYSTEM

- **Pump Type:** Deck Mounted FMC W1122 Bean Pump
- **Output Pressure:** Relief Valve Set at 500 psi (34.5 bar)
- **Max Flow Rate:** 53 gpm (200 L/min)

RIG OPTIONS

- Low Clearance (Short) Mast—13 ft 6 in (4.1 m)
- 325 gal. (1,230.2 L) Detachable Water Tank
- SPT with Mounting (permanent or removable hinged cup)
- Safety Cage (limit switch and rotation button)
- Wireline Winch with 1,250 ft of Ø 1/4 in Steel Cable
- Toolbox: 21 in × 13 in × 72 in (53.34 cm × 33.02 cm × 182.88 cm)
- Progressive Cavity Grout Pump
- Hose Pump
- Casing Clamp Wrench (3rd jaw)
- Diamond Coring Option (DCO) Coring Head with Frame

REV 05/2026 04227