TSI 150AC-8

TERRA SONIC INTERNATIONAL

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

TSI 150AC-8

Crawler-Mounted Articulating Sonic Drill Rig



FEATURES

- Exclusive Sonic Oscillator uses 150 Hz to generate resonant sonic energy with 222 kN (50,000 lbf) of force.
- Accommodates 3 m (10 ft) sections of tooling
- Superior Kinematics allowing various drilling positions
- Capable of drilling with up to 12” (305 mm) casing
- Radio Remote with integrated Display

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SPECIFICATIONS

RIG PERFORMANCE
- **Rated Drill Depth:** Up to 300 m (1,000 ft) in 6” Depending on Lithology
- **Max Drilling Diameter:** 305 mm (12 in) Casing
- **Pull Back Force:** 80 kN (17,958 lbf) Net with Sonic
- **Down Force:** 58 kN (13,035 lbf) Net with Sonic
- **Max Tooling Length:** 3 m (10 ft)

SONIC HEAD
- **SONIC Head Model:** TSi 150
- **Oscillator Frequency:** 0-150 Hz
- **Oscillator Output Force:** 222 kN (50,000 lbf)
- **Oscillator Dampening System:** Active Air Spring
- **Max Torque:** 6,341 Nm (4,677 ft-lb) in both directions
- **Rotation Speed:** 0 to 62 rpm
- **Head Tilt:** 80° Forward
- **Head Safety Monitoring System:** Oil, Air & Bearing Pressure, Oil Level & Oil Temperature, Filter Clogging

TRANSPORT DIMENSIONS
- **Width:** 2.2 m (7 ft 3 in)
- **Length:** 8.65 m (28 ft 5 in)
- **Height:** 3.47 m (11 ft 5 in)
- **Weight:** 19,000 kg (41,888 lbs)
- **Ground Clearance:** 305 mm (12 in)

ENGINE
- **Engine:** Deutz, Model TCD 6.1 L6, 6 Cylinder Diesel, Stage V (Tier 4 Final)
- **Engine Power:** 180 kW (245 HP)
- **Fuel Capacity for Drilling/Transport:** 170 L (45 gal)
- **Air Compressor:** 450 l/min (15.9 CFM) and 12 Bar (174 PSI)
- **Air Tank:** 24 liters (6.3 US Gal)
- **Engine Sound Proofing Enclosure:** Noise Emission Levels as per Directive 2000/14/EC
- **Engine Monitor Mounted in Rig Control Panel**

HYDRAULIC SYSTEM
- **Hydraulic Oil Tank Capacity:** 514 L (135 gal)
- **Oil Cooling System:** Double Air-Oil Heat Exchangers with Thermostat Control for Hydraulic Oil and Sonic Head Lubrication Oil
- **Hydraulic Pumps:** Variable Displacement Load Sensing Axial Piston Pumps and Fixed Displacement Gear Pumps
- **Filter System:** 6 Micron on Pressure and Return
- **Electro-Hydraulic Controls & Manual Setup Functions**

MAST
- **Head Travel/Stroke:** 4.40 m (14 ft 5 in)
- **Up Head Travel Speed:** 0 to 48 m/min (0 to 158 ft/min)
- **Down Head Travel Speed:** 0 to 28 m/min (0 to 89 ft/min)
- **Drilling Angle:** Variable, Depending upon Articulation Positioning
- **Hose Carrier:** Hose Support Chain on Side of Mast
- **Safety Cage:** Anti-Intrusion Infrared Barrier and Restricted Operating Mode (ROM)

DECK
- **Jack Legs:** Two front (Engine side) hydraulic stabilizers 190 mm × 125 mm (7-1/2 in × 5 in) and two rear (mast side) jacklegs 95 mm × 400 mm (3-3/4 in × 15-3/4 in), complete with check valves and located at deck corners

JIB & WINCHES
- **Main winch Hoist Capacity:** 31 kN (6,970 lbf)
- **Main winch Cable:** 30 m (98 ft) of 12 mm (1/2 in) Steel Cable
- **JIB Rotation Angle:** 90° Left, Manually Operated
- **Service winch Hoist Capacity:** 3 kN (764 lbf)
- **Service winch Cable:** 10 m (32 ft 10’) of 6 mm (1/4 in) Steel Cable

CRAWLER
- **Track Width:** 400 mm
- **Crawler Type:** Steel with Rubber Pads
- **Speed:** Dual Speed, 2.2 or 4.0 km/h (1.25 or 2.5 mph)
- **Ground Pressure:** 80 kPa (11.6 PSI)
- **Control:** From Drilling Radio Remote Control

BREAKOUT & CASING WRENCH
- **Top and Bottom Wrenches:** Dual Clamping Cylinders
- **Bottom Wrench Clamping Cylinders:** Lock Valves
- **3rd Bottom Wrench:** For holding Casing
- **Wrench Clamp Force:** Adjustable, set at 153 kN (34,500 lbf)
- **Breakout Torque:** 41,157 N-m (30,365 ft-lb)
- **Wrench Size Range:** 76 mm (3 in) to 305 mm (12 in)
- **Wrench Travel/Swing:** 19°
- **Standard Hardened Teeth Inserts**

WATER/MUD & WASHING SYSTEM
- **Pump Type:** External Mounted FMC W1122 Triplex Pump
- **Output Pressure:** 69 bar (1,000 psi) with Safety Relief Valve
- **Max Flow Rate:** 200 L/min (53 gpm)
- **Pressure Washer:** Lance with 15m hose powered from W1122

OTHER ITEMS
- **Radio Remote Control:** 2 Batteries, 1 On-Board Charger
- **Full Toolbox:** For drilling rig maintenance
- **Work Lights:** LED Lights on Mast, Control Panel and Inside Engine Sound Proof Enclosure
- **Emergency Stops:** On all Sides of the Rig and Radio Remote
- **Power Take Off 1x1:** Two connections with control and case drain
- **Technical Information:** Rig Supplied with Operation and Maintenance Manual, Paper and Interactive Spare Parts Catalogue and CE Declaration and Conformity.

RIG OPTIONS
- **Welder Generator:** 3 KVA 220V / 6.5 KVA 380V / Weld Power 220 A
- **Progressive Cavity Grout Pump:** Max. 15.5 bar (225 PSI) / Max. 394 lpm (104 gpm)
- Other options on request

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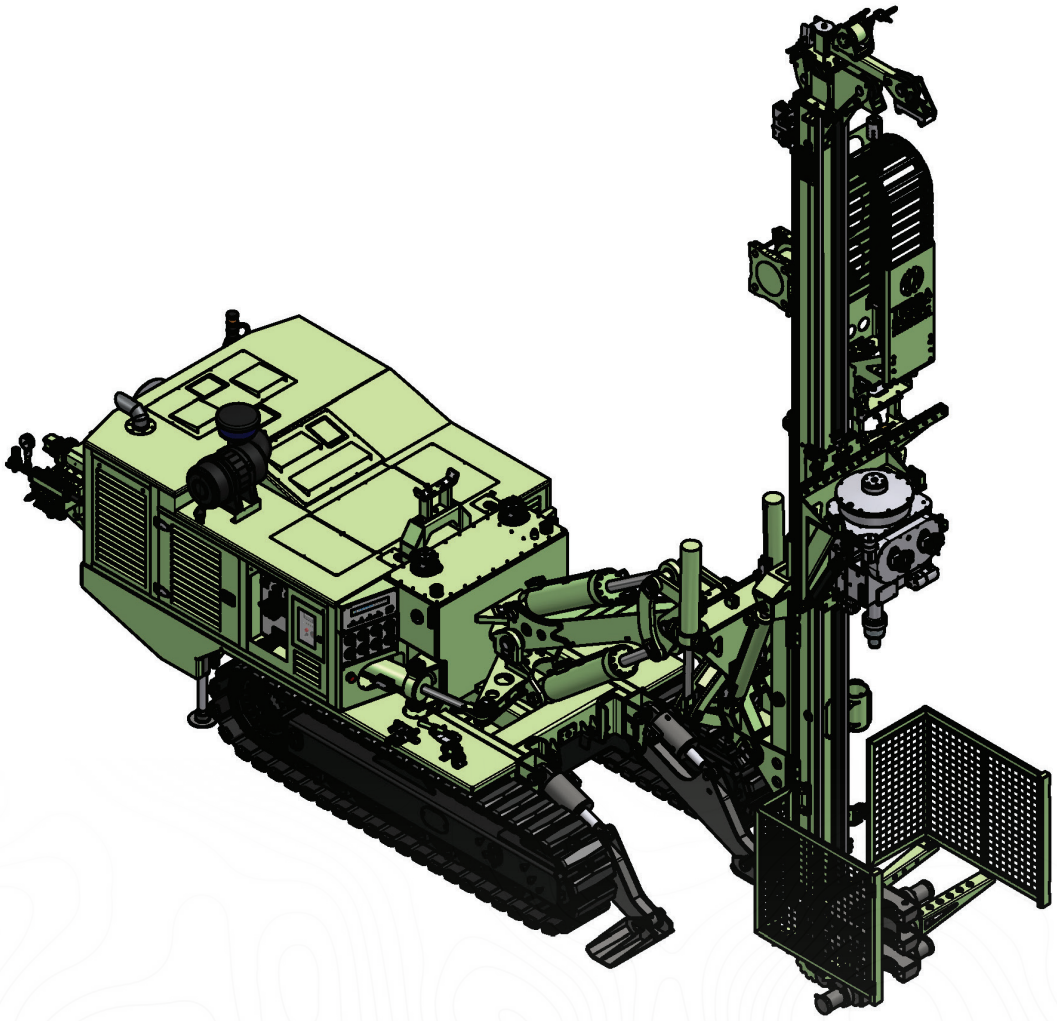
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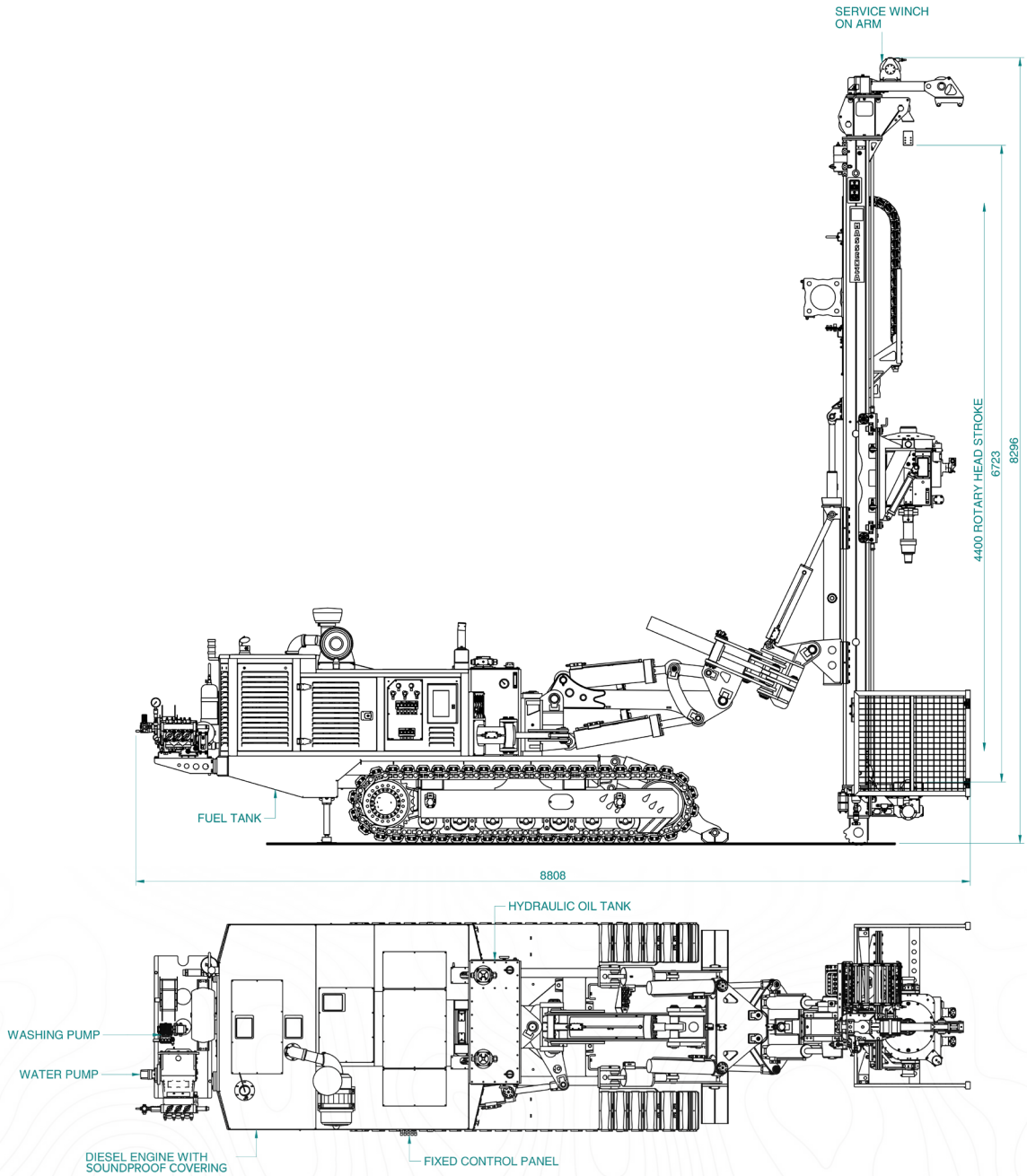
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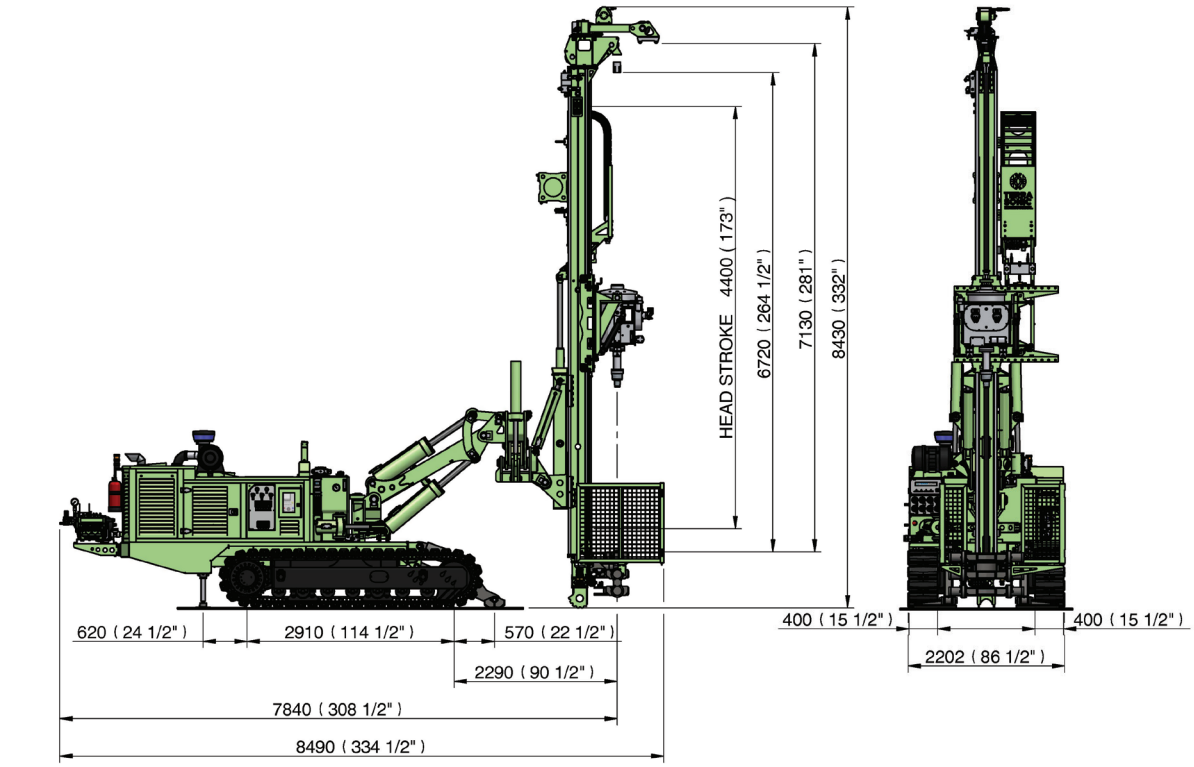
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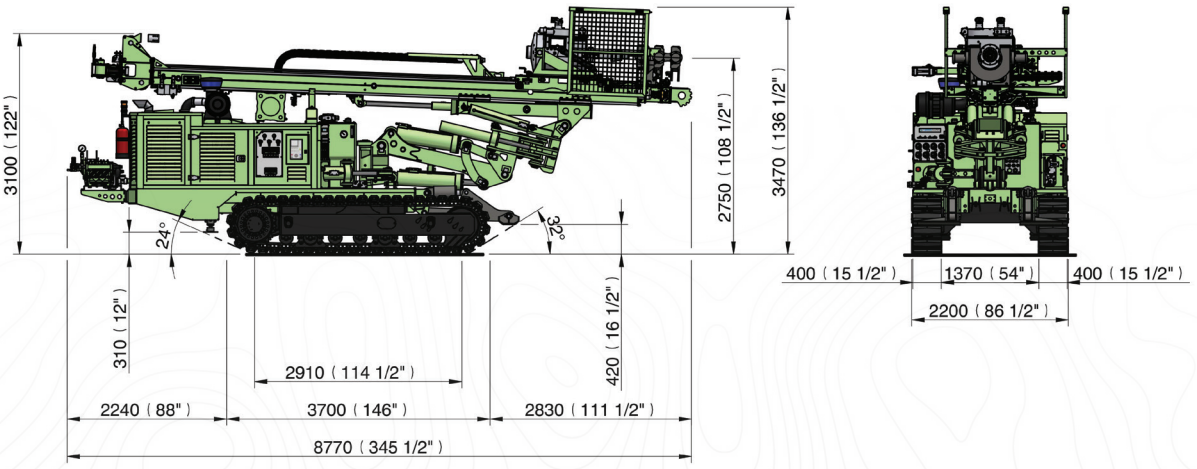
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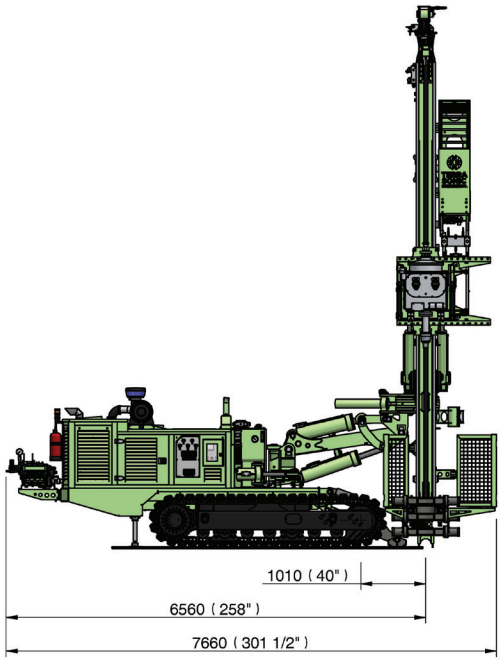
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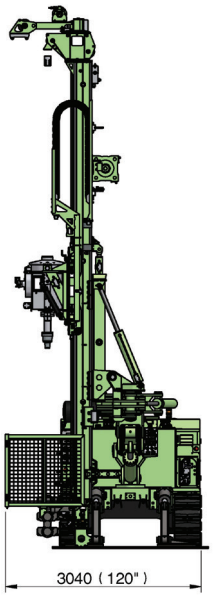
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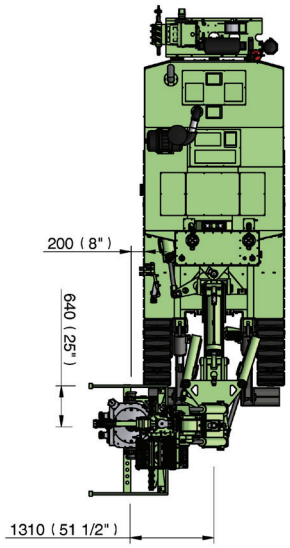
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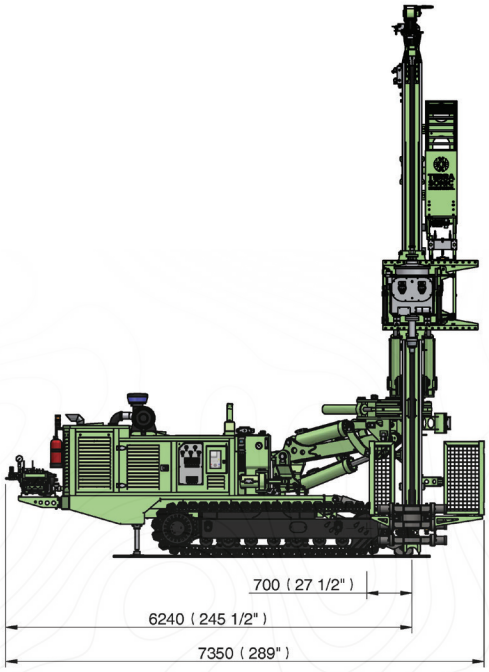
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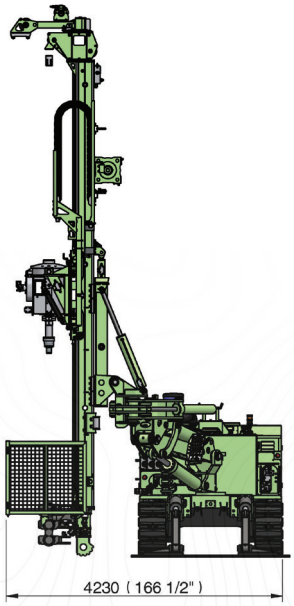
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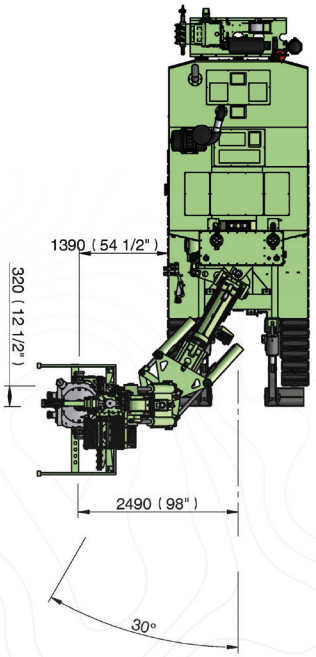












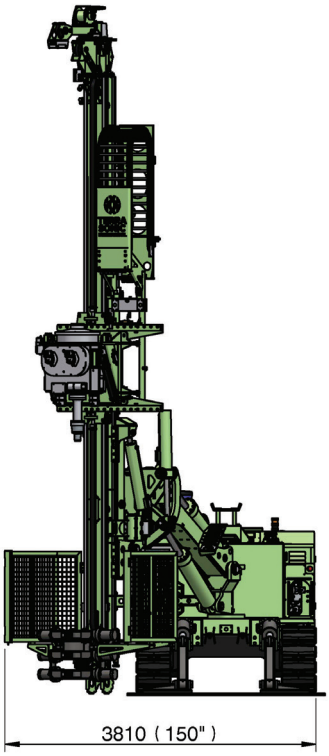
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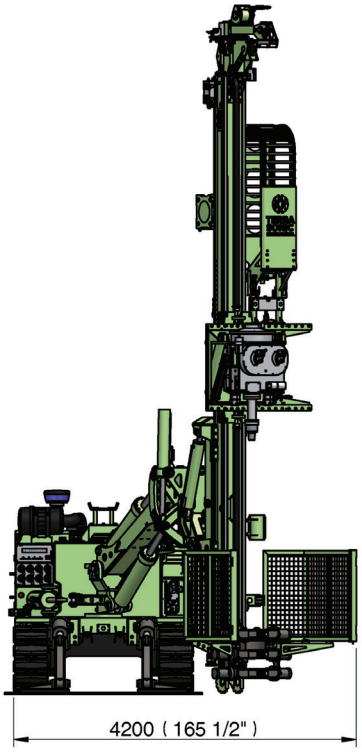
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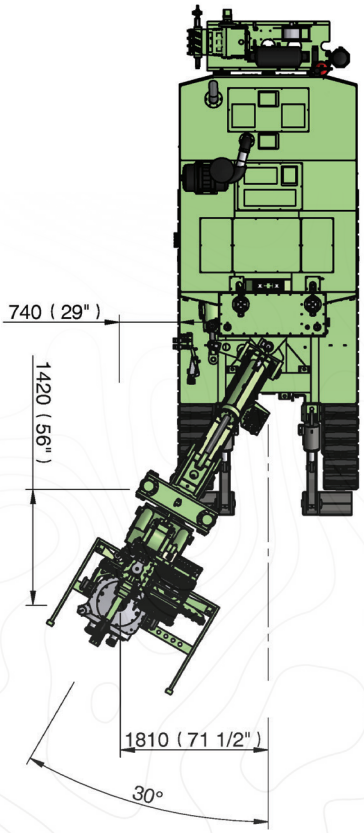
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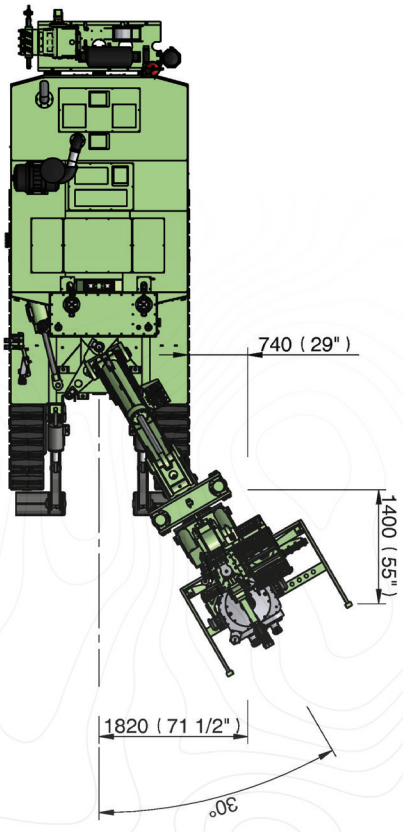
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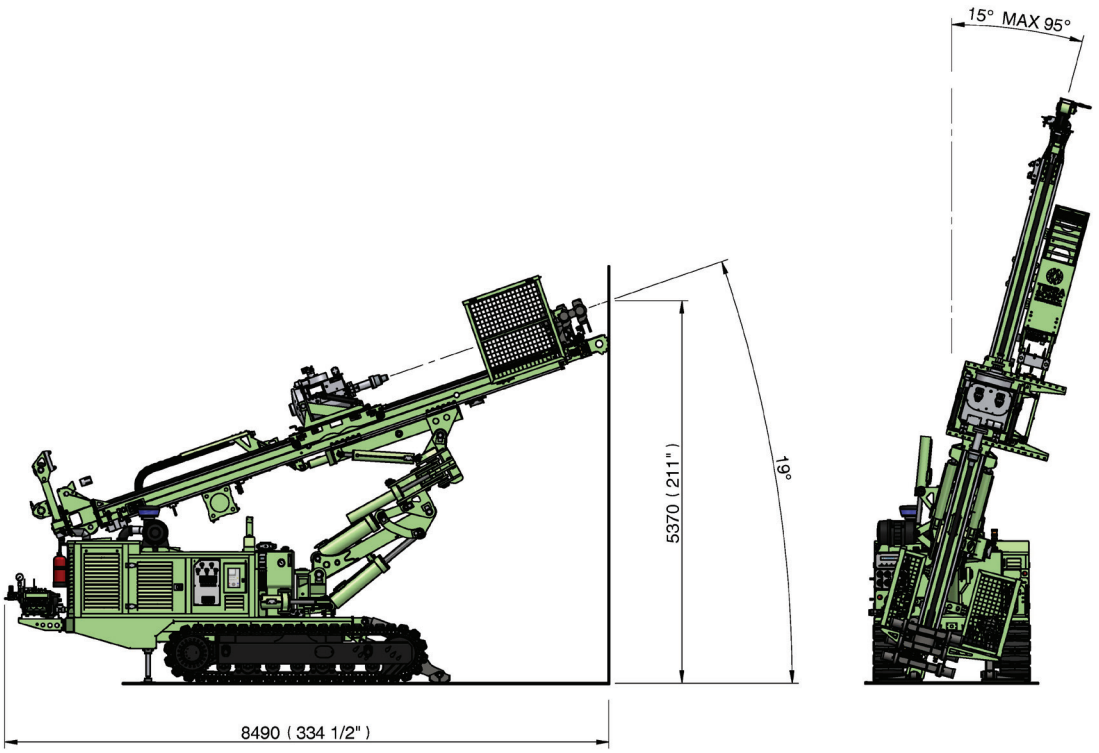
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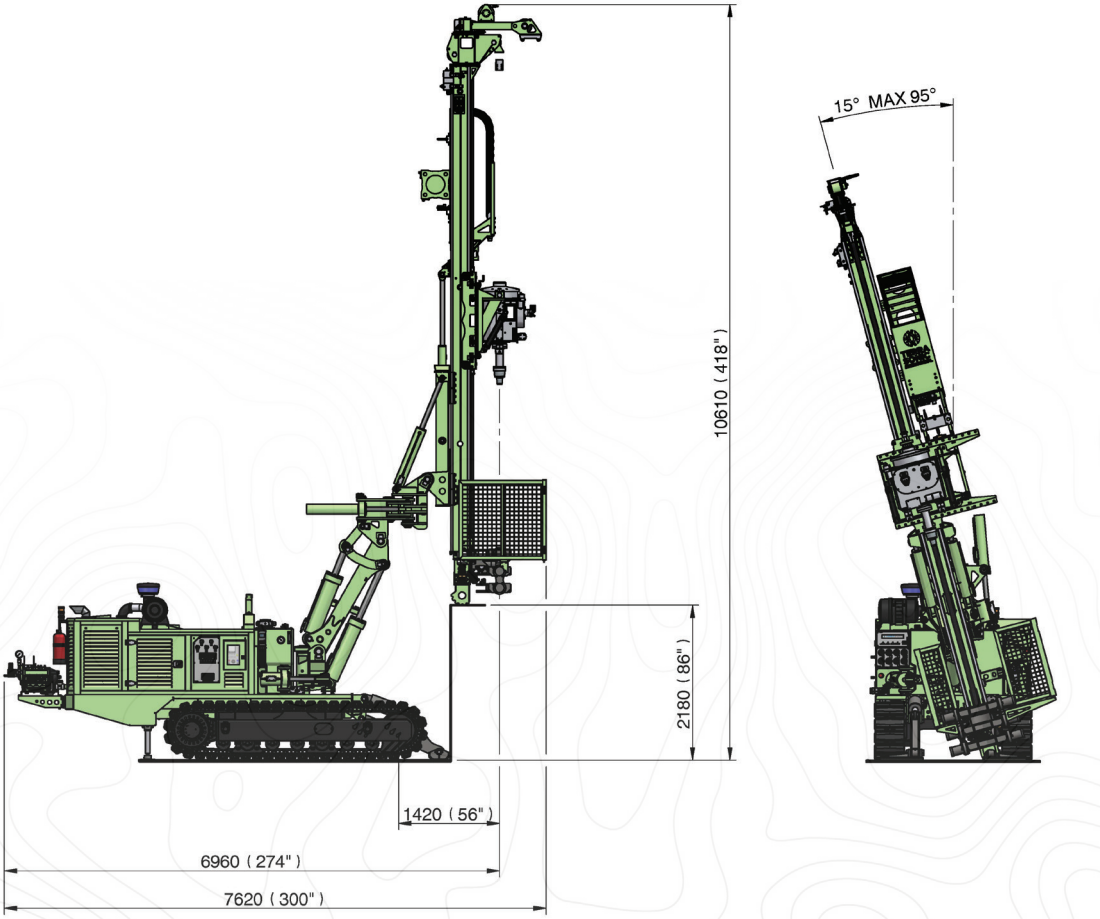
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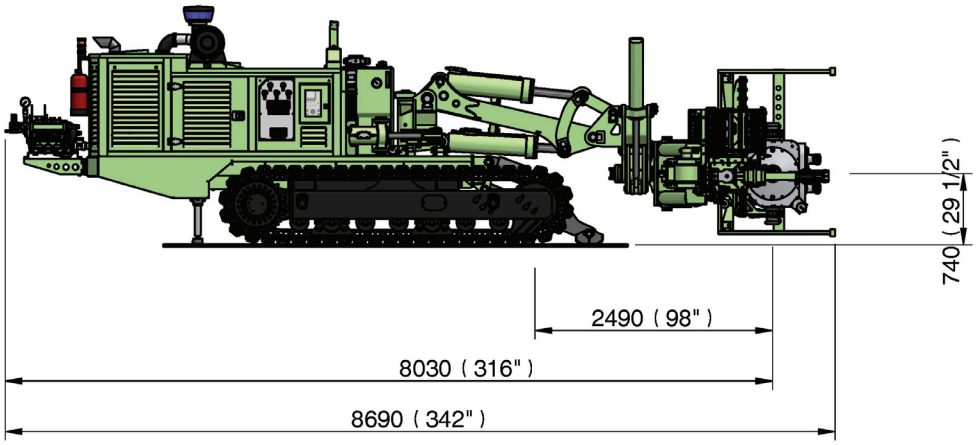
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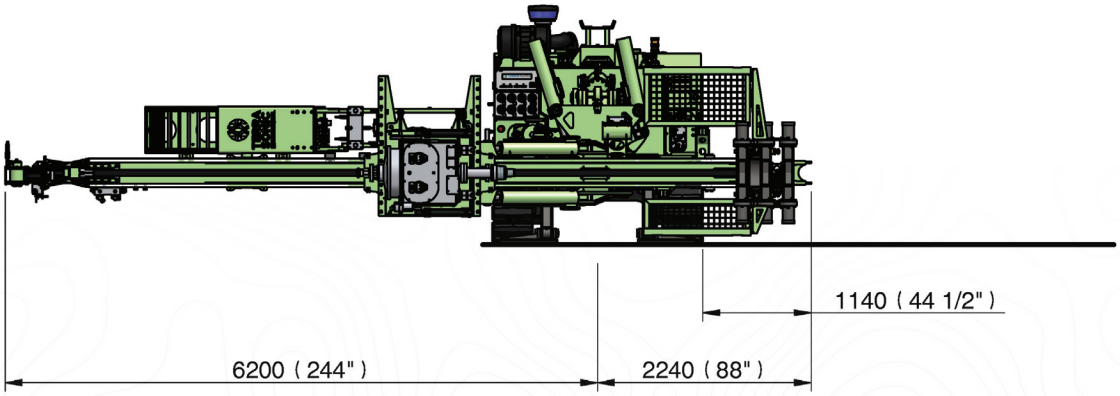
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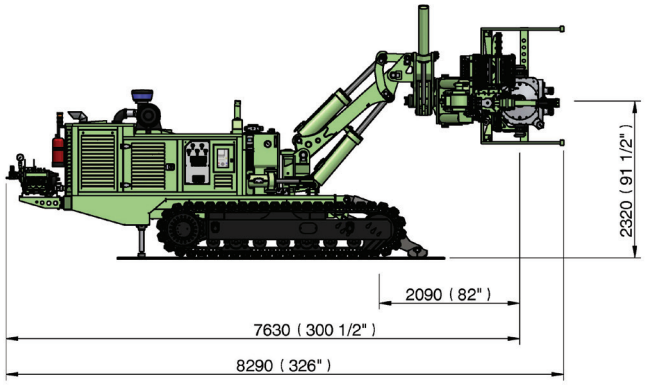
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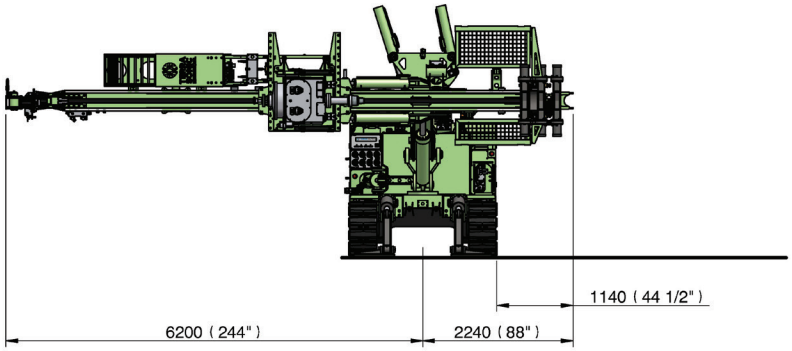
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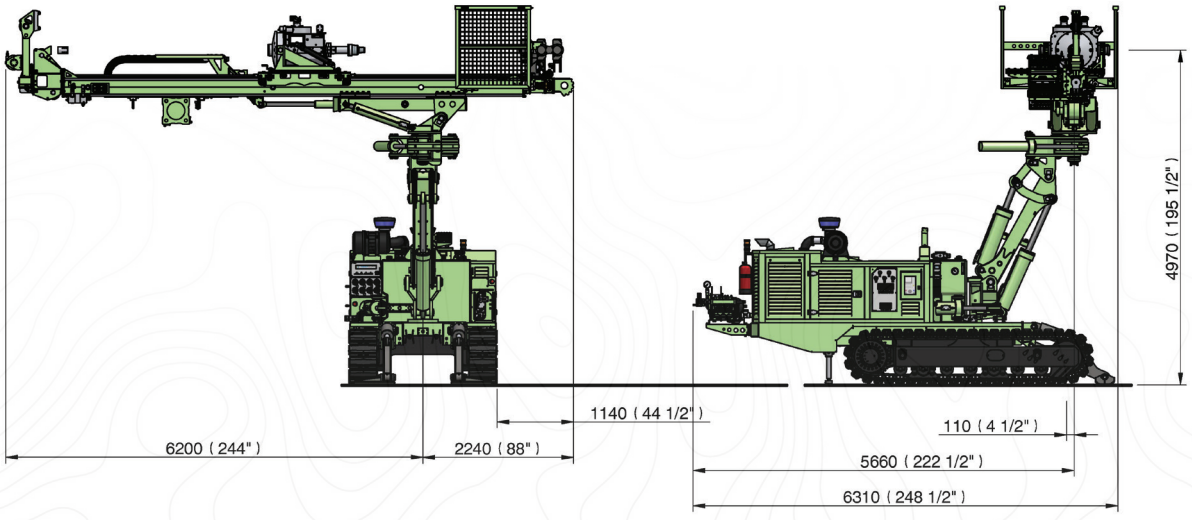
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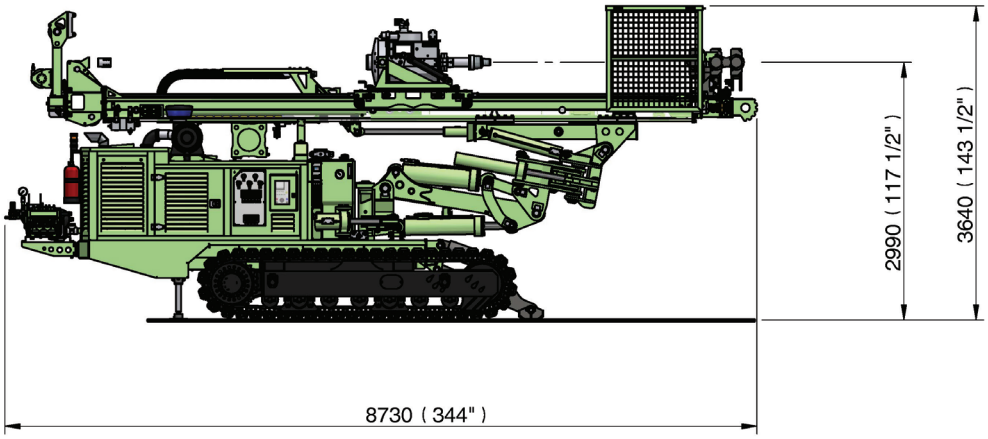
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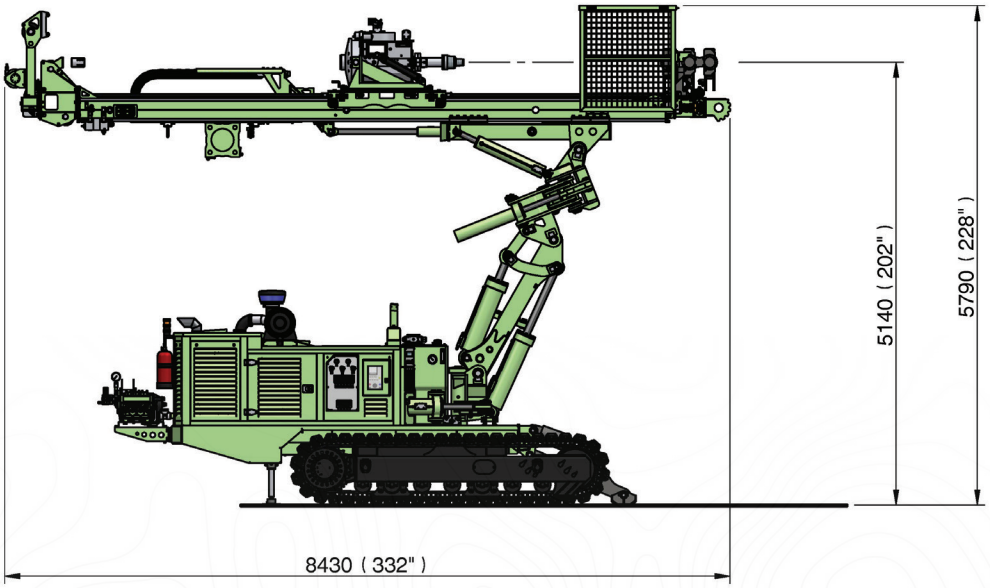
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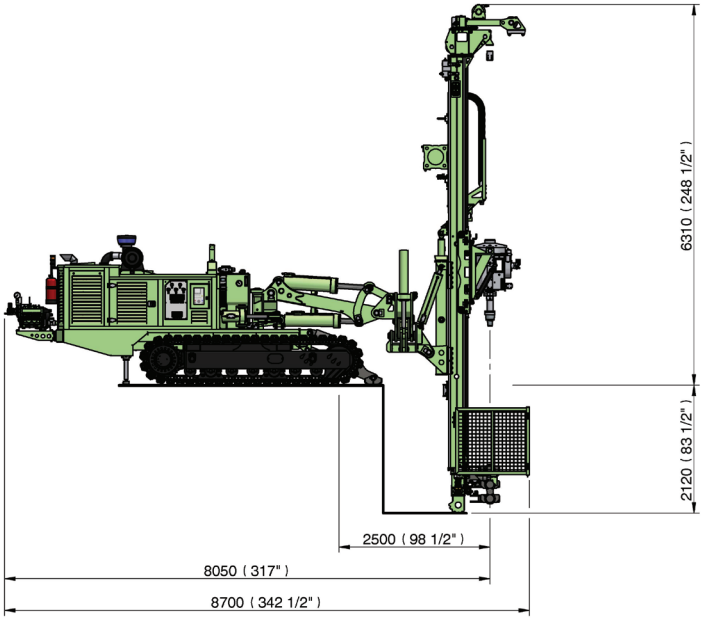
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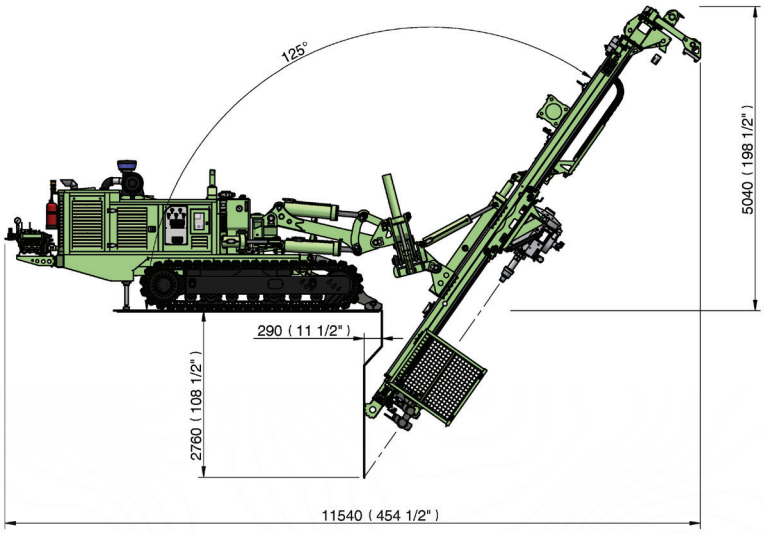
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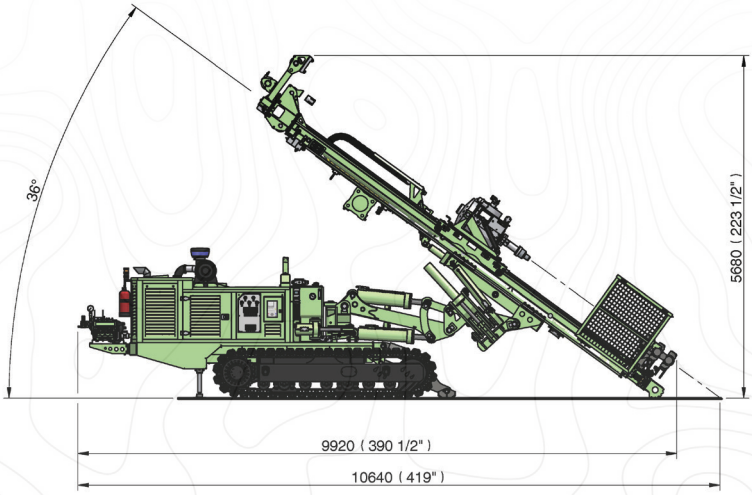
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