

CSR 155

SPT, CPT & Wireline Rotary Core Test Drill Rig



TMG
MANUFACTURING

CSR 155
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The new CSR-155 soil test drill rig is a compact and powerful rig for SPT, CPT, wireline coring and rotary drilling. The CSR-155 has the versatility to auger drill, rotary/mud drill, wireline rotary core drill, SPT hammer test and full-function CPT test in ONE compact track mounted drill rig. This drill rig is a first in the industry.

The Crossover Rig (CSR-155) has a two-drilling position drillhead cart. Position one carries the 4-speed drillhead. The second position is blank and can be used for other tooling, autohammer, CPT push head, wireline core drilling, etc

55
HORSEPOWER

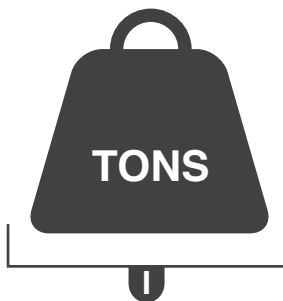
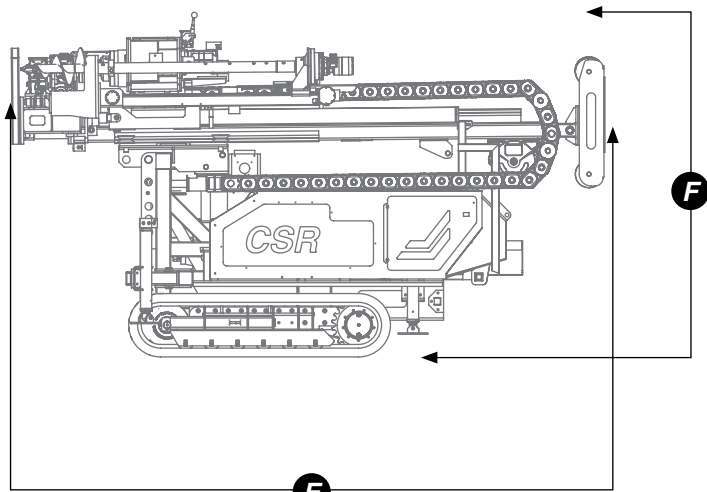
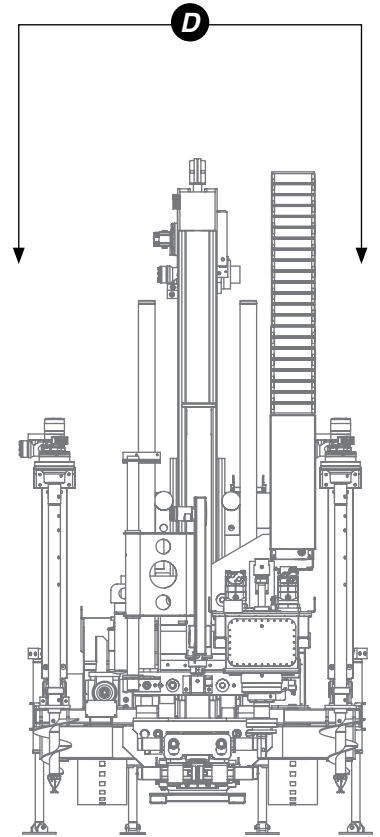
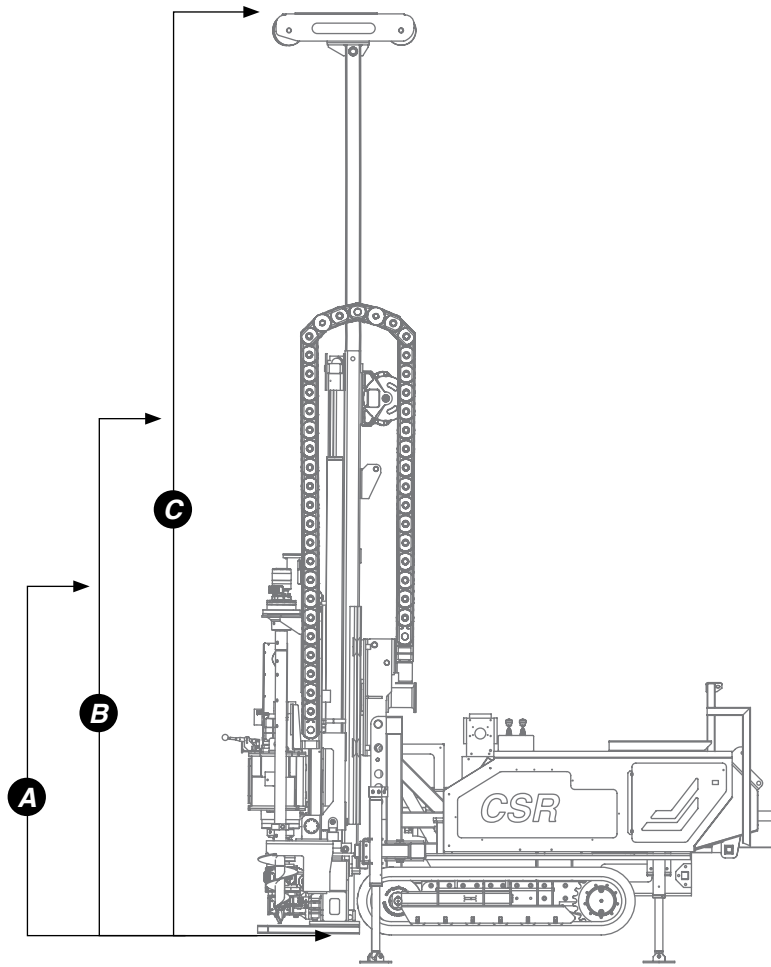
9161
FT LBS OF TORQUE
(with rotary drill head ML-500)

482
RPM / 4-SPEED GEAR BOX DRILL HEAD

250-500
FEET OF DEPTH
(with rotary drill head ML-500)

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DIMENSIONS

Standard Mast (5 ft - 1.5 mts drill pipe)

- A. Stroke (other sizes available)**
80" (7') - 203 cm.
- B. Height - Tower retracted**
151.5" (12.6') - 384 cm.
- C. Height - Tower extended**
229" (19') - 582 cm.
- D. Width**
78" (6.5') - 200 cm.
- E. Length - Mast tilted**
151" (12.5') - 383 cm.
- F. Height - Mast tilted**
91" (7.5') - 231 cm.
- G. Weight (approximate)**
5.25 tons - 10.500 lbs.

Engine

- 55 hp (42 kW), tier-4 compliant, turbo charged diesel engine
- Water cooled
- 12 V electric start
- Emergency stop button
- Rpm gauge
- Oil pressure gauge

Hydraulic System

- 45 gpm (170 lpm) max combined hydraulic flow
- Max 3000 psi (206 bar)
- Load sensing variable displacement axial piston pump
- Feather touch controls
- Oil cooler

Track System

- Stationary track system (300 mm wide 1727 mm long - 11.8" wide 68" long -)
- NACHI 3B track motor with automatic brake system
- Built in grease filled tensioning arm and spring

Mast

- 20 or 10 ton dual-cylinder mast for CPT, SPT, auger and rotary drilling
- Rotary encoder for position and velocity measurements
- 7 ft (2.13 m) stroke
- Max 20 ton (40,000 lbs) pull down force
- Max pull up force 26 tons (52,000 lbs)
- Travel speed control (for CPT 2 cm/sec)

Telescopic Winch Tower

- 19 ft (5.79 m) max height (longer travel available)
- Dual pulley system - SPT rope pulley and wireline pulley

SPT Hammer System

- Rotary capstan system for manual SPT hammer (SPT hammer sold separately) (SPT auto hammer option available)

Pipe Clamp

- Single pipe/rod bottom clamp
- Size capability from 1.5" to 6". (Other sizes available)

Drive Head

- 2-position drill head (rotary & auger drill, and CPT head)

Drill Motor 1 - Rotary Gearbox MS-500

- Gear 1: 482 rpm at 573 ft lbs (776 Nm) torque
- Gear 2: 241 rpm at 1145 ft lbs (1552 Nm) torque
- Gear 3: 120 rpm at 2290 ft lbs (3104 Nm) torque
- Gear 4: 60 rpm at 4580 ft lbs (6209 Nm) torque
- Complete drill head motor options in next page
- Built-in heavy duty wet swivel (see bellow)

Heavy Duty Wet Swivel

- Top intake
- One quick-change connector (AWJ, AW, BW, BQ, NW, NQ, HW, HQ, PW, PQ) others available
- Automatic spring floating system

CPT Push Head

- Top down CPT push system

CPTu Equipment (sold separately)

- Controller datapack with data acquisition software
- Cone - 10 or 15 cm, with friction sleeve, pore pressure transducer and dual axis inclinometer and built-in seismic (seismic available as an upgrade)
- 40 meters cable
- 30 x 1 meter long cone rods
- Spare parts:
 - 8 x piezocone cone tips
 - 8 x piezo filter HT (10 per pkg - in silicone)
 - 4 x friction sleeve
 - 2 x retaining O-ring kit
 - 4 x cone O-ring kit
- Other equipment options available

Leveling Outriggers

- 4 hydraulic level outriggers with independent controls

Mud Pump

- Moyno 3L6 (or equivalent) continuous flow stator/rotor style mud pump
- Up to 225 psi (15.5 bar)
- 25 gpm flow (94 lpm)
- Independent hydraulic motor
- Quick coupling
- Mounted on drill rig frame

Lifting Winch

- 4,500 lbs (2,041 kg) lift capacity
- Planetary gear with break
- Balance weight and locking hook
- ¼"- ½" (6-12 mm) cable diameter

Wireline Winch - 2nd Winch

- For wireline operations
- 1,000 lbs (453 kg) lift capacity
- 20 ft/sec travel speed

Fuel Tank

- 10 gallon (37 liters) fuel tank with fuel sending sensor

Hydraulic Oil Tank

- 30 gallon (113 liters) hydraulic oil tank with built in site level glass

Accessories

- Auxiliary power inverter

Options

- Various auger drill heads available
- Direct push drill head
- Remote control for driving operations
- Automatic drop hammer 140 lbs (63 kg)
- Manual drop hammer 140 lbs (63 kg)
- Dual pipe clamp with breakout
- Multiple anchoring options available
- PC/Tablet

Rotary Drill Head Gearbox Options

For 55 hp & 45 gpm, diesel engine

MS Series

MS-200

	GEAR 1	GEAR 2	GEAR 3	GEAR 4
RPM - Max speed	1253	627	313	157
TORQUE - Lb ft	220	440	881	1761
TORQUE - Nm	298	596	1194	2387

MS-250

	GEAR 1	GEAR 2	GEAR 3	GEAR 4
RPM - Max speed	1002	501	250	125
TORQUE - Lb ft	275	551	1101	2203
TORQUE - Nm	372	747	1492	2986

MS-400

	GEAR 1	GEAR 2	GEAR 3	GEAR 4
RPM - Max speed	773	387	193	97
TORQUE - Lb ft	357	714	1427	2855
TORQUE - Nm	484	968	1934	3870

MS-500 - Standard

	GEAR 1	GEAR 2	GEAR 3	GEAR 4
RPM - Max speed	482	241	120	60
TORQUE - Lb ft	573	1145	2290	4580
TORQUE - Nm	776	1552	3104	6209

ML Series

ML-200

	GEAR 1	GEAR 2	GEAR 3	GEAR 4
RPM - Max speed	1253	627	157	78
TORQUE - Lb ft	220	440	1761	3523
TORQUE - Nm	298	596	2387	4776

ML-250

	GEAR 1	GEAR 2	GEAR 3	GEAR 4
RPM - Max speed	1002	501	125	63
TORQUE - Lb ft	275	551	2203	4405
TORQUE - Nm	372	747	2986	5972

ML-400

	GEAR 1	GEAR 2	GEAR 3	GEAR 4
RPM - Max speed	773	387	97	48
TORQUE - Lb ft	357	714	2855	5710
TORQUE - Nm	484	968	3870	7741

ML-500

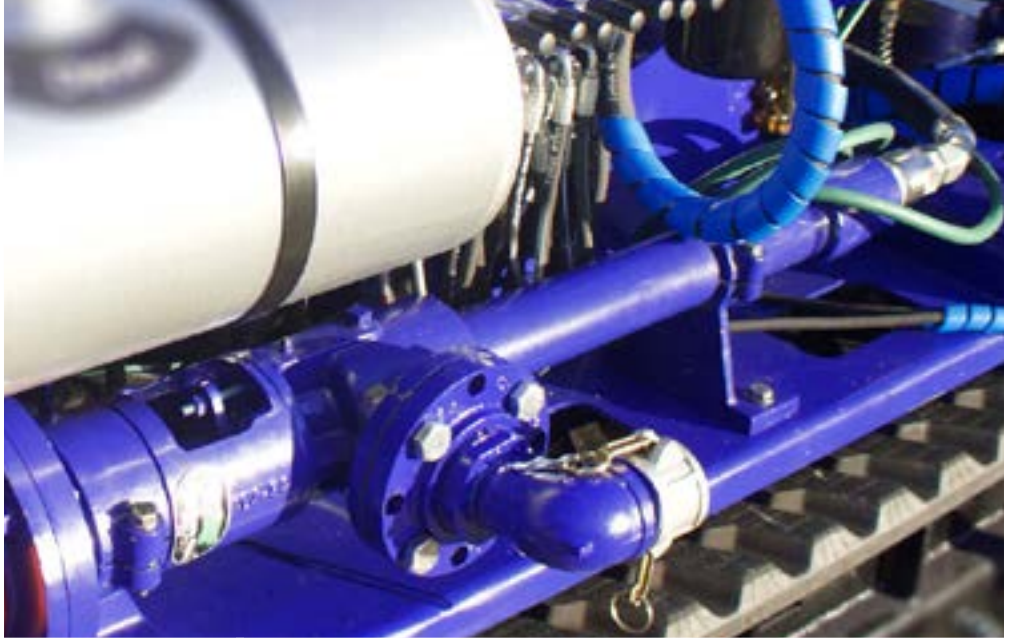
	GEAR 1	GEAR 2	GEAR 3	GEAR 4
RPM - Max speed	482	241	60	30
TORQUE - Lb ft	573	1145	4580	9161
TORQUE - Nm	776	1552	6209	12420

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CSR 155 SPT, CPT & Wireline Rotary Core Test Drill Rig





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