

MBX-50

Compact Geotechnical Rig for SPT, Rotary & Auger Drilling



MBX-50

Compact Geotechnical Rig for SPT, Rotary & Auger



The MBX-50 stands out as a robust and versatile geotechnical drill rig, engineered within a compact frame and equipped for a diverse range of drilling methods.

This rig comes with a built-in SPT autohammer and a 4-speed MML-200 rotary drill head with up to 3,496 ft lbs of torque and a maximum speed of 800 rpm, enabling the use of solid flight or hollow stem augers, mud rotary drilling, and shallow wireline core drilling, tricone drilling, direct push sampling, Shelby tube sampling, and DTH drilling. A high-speed winch provides 1,100 lbs of lift force.

The fully extendable mast uses a single hydraulic cylinder with a calculated pull-out force of 19,439 lbs at 3,000 psi.

Additionally rods, bits, laptop and other necessary accessories are not included.



**SPT
SAMPLING**



**AUGER
DRILLING**



**TRICONE
ROCK DRILL**



**MUD
ROTARY DRILL**



**DIRECT
PUSH**

MBX-50

Compact Geotechnical Rig for SPT, Rotary & Auger

DRAFT - Updated MBX-50 specifications; remaining MCX technical references pending confirmation.

Engine

- 52 hp Hatz Tier 4 engine
- Liquid cooled
- 12 V electric start
- Emergency stop button
- RPM gauge

Fuel Tank

- 16 gallon (60 liters) fuel tank with fuel sending sensor

Hydraulic Oil Tank

- 20 gallon (75 liters) hydraulic oil tank with built in site level glass

Hydraulic System

- 35 gpm (132 lpm) max hyd flow
- Max 3000 psi (206 bar)
- Load sensing variable displacement axial piston pump
- Feather touch controls
- Oil cooler

Drill Head - 4-Speed MML-200

- 4-speed gearbox performance based on 20 gpm
- Gear 1: 3,496 ft lbs torque - 100 rpm
- Gear 2: 1,748 ft lbs torque - 200 rpm
- Gear 3: 410 ft lbs torque - 400 rpm
- Gear 4: 205 ft lbs torque - 800 rpm

Track System

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

Mast

- Single hydraulic cylinder: 3.5 in bore / 2 in rod
- Tilt position for traveling
- 5 ft (1.5 m) stroke
- Optional upgrade: 83 in (211 cm) mast stroke
- 28,863 lbs down force at 3,000 psi
- 19,439 lbs lift / pull-out force at 3,000 psi

Options

- Wireless control for driving operations
- 180 lb Texas DOT Autohammer
- Safety gate
- Piston water/mud pump
- Moyno water/mud pump

Leveling Outriggers

- 4 hydraulic level outriggers with independent controls

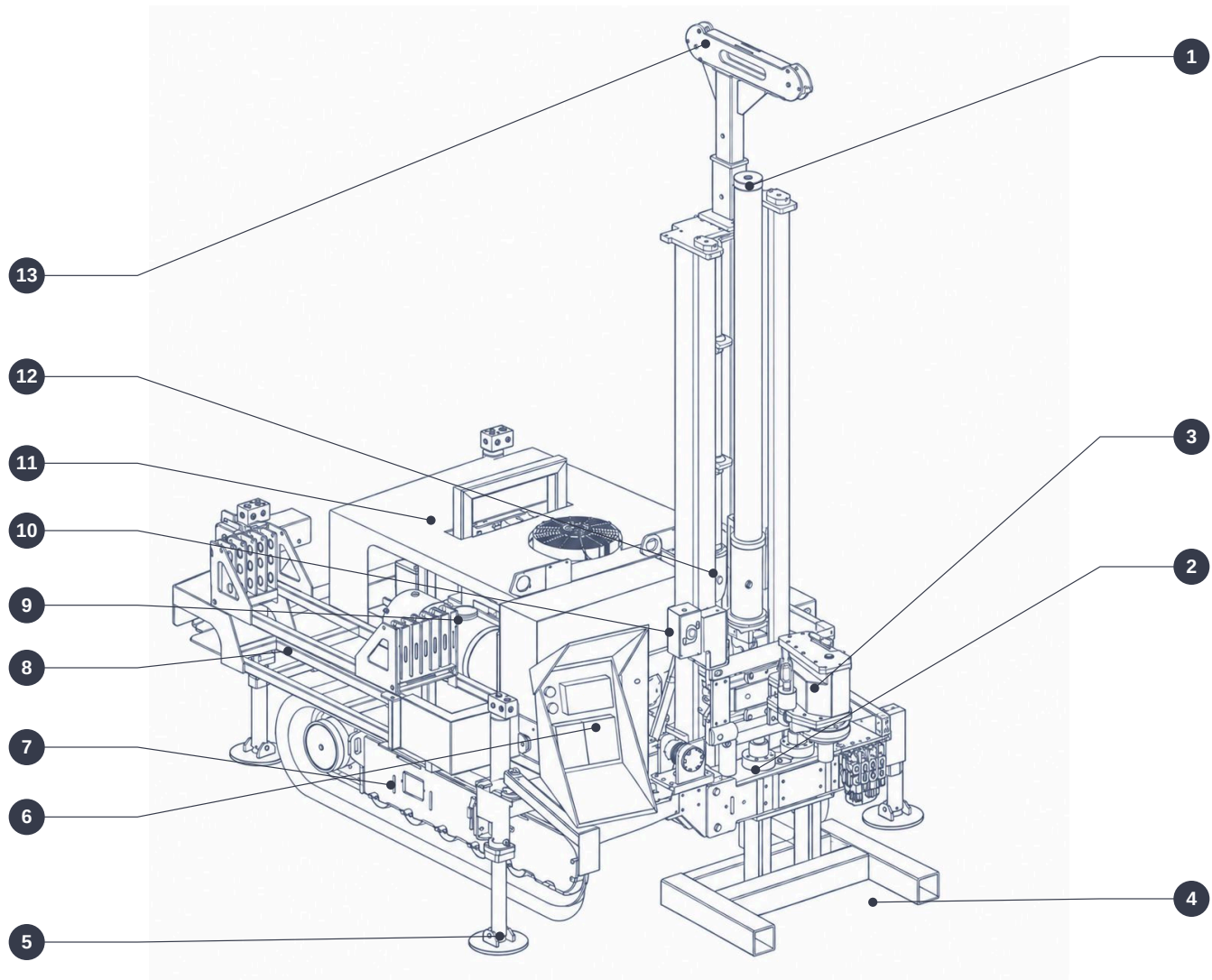
Accessories

- Auxiliary power inverter
- Rod rack

MBX-50

Compact Geotechnical Rig for SPT, Rotary & Auger

DRAFT - Updated MBX-50 specifications; remaining MCX technical references pending confirmation.



1. Single cylinder - 19,439 lb pull-out
2. Push/pull clamp
3. MML-200 drill head
4. Mast foot
5. Outriggers (2x front / 2x rear)
6. Control box
7. Rubber tracks (left / right)

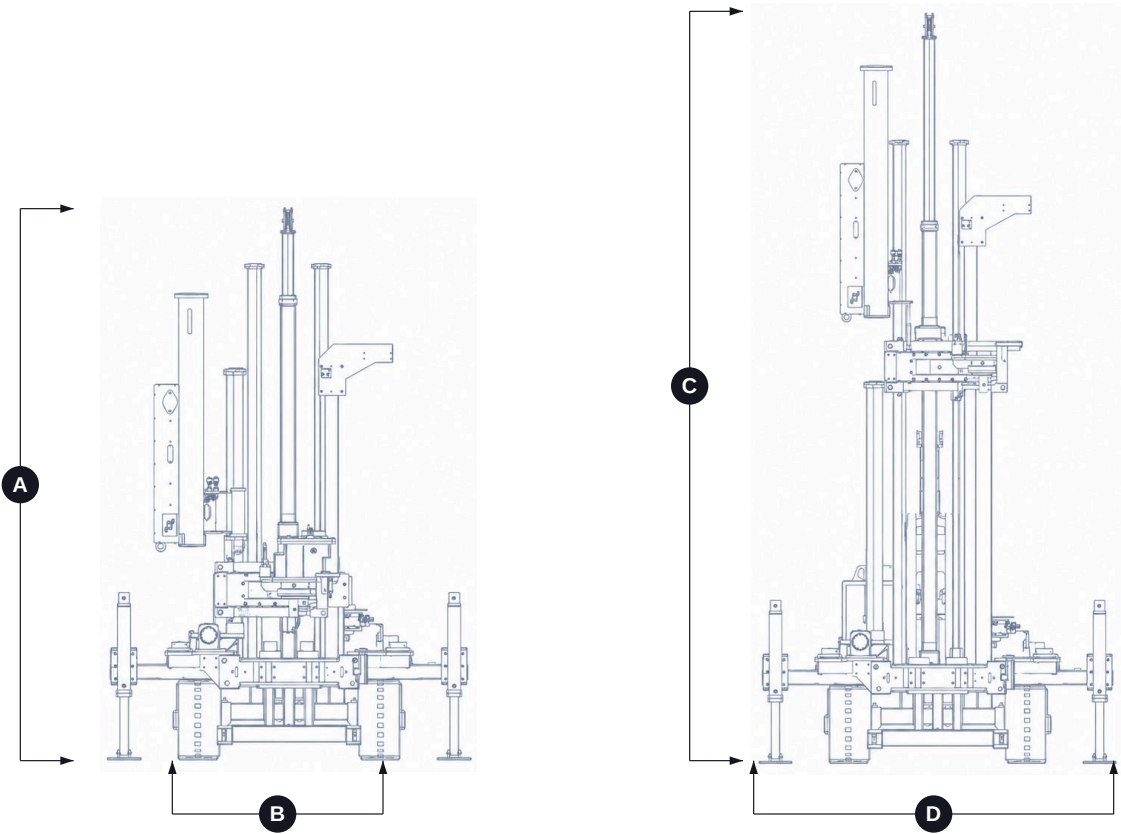
8. Rod rack (SPT rods)
9. Fuel tank
10. Electrical box
11. Engine compartment
12. SPT Autohammer
13. SPT Tower

Illustrative configuration drawing - final engineering details pending confirmation.

MBX-50

Compact Geotechnical Rig for SPT, Rotary & Auger

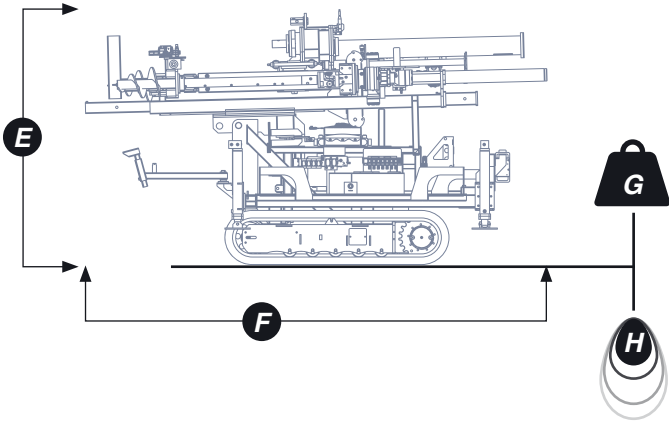
DRAFT - Updated MBX-50 specifications; remaining MCX technical references pending confirmation.



A	B	C
HEIGHT (CYLINDER RETRACTED)	BASE WIDTH (FROM TRACK TO TRACK)	HEIGHT (CYLINDER EXTENDED)
132" (11') - 335 cm	56" (4.6') - 142 cm	181" (15') - 460 cm

D	E	F
FRAME WIDTH	HEIGHT (MAST TILTED)	LENGTH (MAST TILTED)
75" (6.25') - 190 cm	75" (6.25') - 190 cm	128" (10.6') - 325 cm

G	H
WEIGHT (APPROXIMATE)	GROUND PRESSURE (APPROXIMATE)
9000 lbs - 4082 kg	26,2 psi



MBX-50

Compact Geotechnical Rig for SPT, Rotary & Auger

DRAFT - Updated MBX-50 specifications; remaining MCX technical references pending confirmation.

Specifications		MBX-50
Drilling Style	Wireline core drilling	Yes - shallow drilling
	Auger drilling	Yes
	Mud rotary drilling	Yes
	Tricone rock drilling (requires mud pump)	Yes
	DTH (Down the hole hammer) (requires air source)	Yes
	SPT	Yes
	Direct push sampling	Yes
Drain Capacity	Wireline core drilling - feet (meters)	Shallow drilling - depth pending confirmation
	Auger (depends on auger and soils) - feet (meters)	90-200 ft (30-70 m)
Engine	Engine power - hp (kw)	52 hp Hatz
	Fuel	Diesel
	Emissions standard	Tier 4
	Cooling system	Liquid cooled
	Fuel tank capacity - US gallons (liters)	16 gal (60 L)
Mast	Mast stroke - Standard - inches (centimeters)	72 in (182 cm)
	Mast stroke - Optional upgrade - inches (centimeters)	83 in (211 cm)
	Single hydraulic cylinder - lift / pull-out force	19,439 lbf (8,817 kgf) at 3,000 psi
	Single hydraulic cylinder - down force	28,863 lbf (13,092 kgf) at 3,000 psi
Drillheads	MML-200 - Gear 1 (performance at 20 gpm)	3,496 ft lbs torque / 100 rpm
	MML-200 - Gear 2 (performance at 20 gpm)	1,748 ft lbs torque / 200 rpm
	MML-200 - Gear 3 (performance at 20 gpm)	410 ft lbs torque / 400 rpm
	MML-200 - Gear 4 (performance at 20 gpm)	205 ft lbs torque / 800 rpm
Tracks System	Track carrier motor (2B, 3B, 4B)	2B No 3B Yes 4B No
	Track rubber pad width - inches (centimeters)	N/A 11.8 in (29.9 cm) N/A
	Track contact area - inches ² (centimeters ²)	N/A 630 in ² (4064 cm ²) N/A
	Ground pressure - psi (bar)	N/A 26.2 psi (1.8 bar) N/A
	Track travelling speed - mph (kph)	N/A 2-4 mph (3-6 km/h) N/A
Hyd System	System pressure - psi (bar)	3000 psi (206 bar)
	Hydraulic flow - Gallons per minute (liters per minute)	35 gpm (132 lpm)
	Hydraulic oil tank capacity - US gallons (liters)	20 gal (75 L)
Winches	Main Winch (A44 or A11)	A44 No A11
	Main winch force - pounds (kilograms)	N/A 1100 lbs (498 kg)
	Main winch line speed - ft/s (m/s)	N/A N/A
	Wireline winch (A11)	No
	Wireline winch force - pounds (kilograms)	N/A
	Wireline winch line speed - ft/s (m/s)	N/A
Water Pump	Moyno pump size (3L4, 3L6, 3L8) (upgrade option)	3L4 Yes 3L6 Yes 3L8 No
	Moyno pump flow - Gallons per minute (liters per minute)	18 gpm (68 lpm) 47 gpm (177 lpm) N/A
	Moyno pump pressure - psi (bar)	225 225 N/A
	Piston pump (optional)	No
Body	Total machine weight - pounds (kilograms)	9000 lbs (4082 kg)
	Wired remote std	Yes
	Remote radio control (upgrade option)	Yes
	Safety gate (upgrade option)	Yes
	Mounting option (tracks std, truck, trailer)	Tracks Yes Truck Yes Trailer Yes
SPT Hammer	Autohammer (140lb std) or (Texas DOT, 180lb)	140lb Yes 180lb Yes
	Manual hammer + capstan (140lb) or (Texas DOT, 180lb)	140lb No 180lb No

Cylinder force basis: 3.5 in bore, 2 in rod, 3,000 psi; direct 1:1 action, excluding friction and backpressure.

* std: for standard equipment

MBX-50

Compact Geotechnical Rig for SPT, Rotary & Auger

DRAFT - Updated MBX-50 specifications; remaining MCX technical references pending confirmation.

Drill Head	Gear 1	Gear 2	Gear 3	Gear 4
MML-200	100 rpm / 3,496 ft lbs	200 rpm / 1,748 ft lbs	400 rpm / 410 ft lbs	800 rpm / 205 ft lbs

4-speed MML-200 gearbox performance based on 20 gpm.



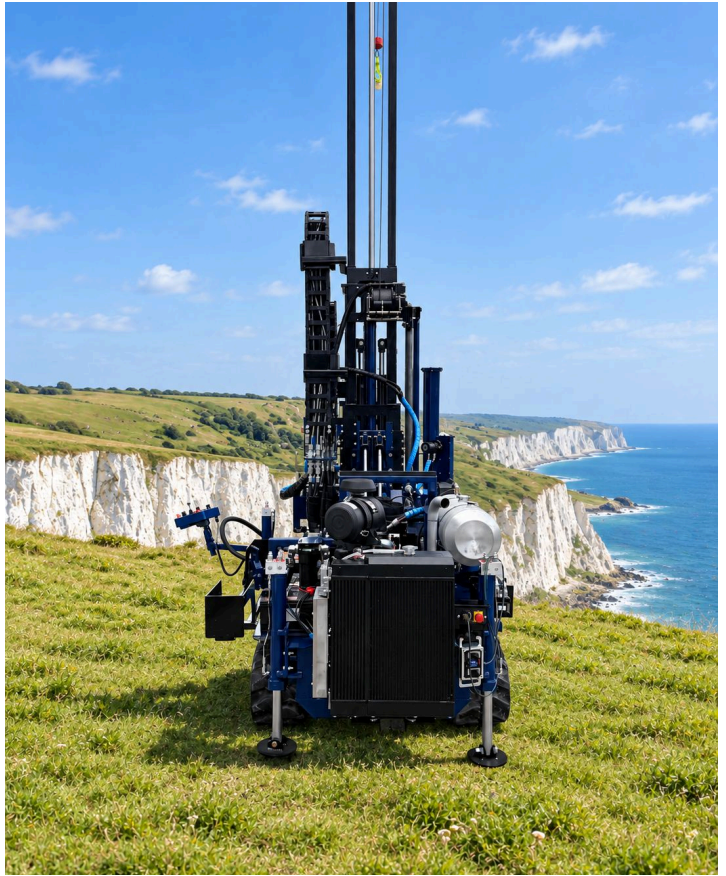
MBX-50

Compact Geotechnical Rig for SPT, Rotary & Auger



MBX-50

Compact Geotechnical Rig for SPT, Rotary & Auger



Our locations

Visit us, we will be happy to welcome you.

Corporate headquarters



Address: 5517 W. Sligh Ave, Suite 100. Tampa, FL 33634
Phone: (813) 464-2299
Toll-Free: 1-888-508-RIGS (7447)
Email: info@tmgmfg.com
Website: www.tmgmfg.com

Latin America Branch



Address: Ofibodegas Milano B16, Alajuela, Costa Rica
Phone: (506) 4001-5984
Email: info@tmgdrill.com
Website: www.tmgdrill.com

Join the conversation

We would be glad to see you online.



Professional
TMG Manufacturing



Videos
TMG Manufacturing



Social
TMG Manufacturing



Direct Message
(506) 7073-5061



Pictures Gallery
TMG Manufacturing

MBX-50

Compact Geotechnical Rig for SPT, Rotary & Auger

