

LF90D Diamond Core Drill - Truck Mounted

DRILLING DEPTH GUIDELINES

The figures in these tables have been calculated, based on field experiences, and may be reasonably expected. Ratings are based on a vertical, straight, clean down hole using a

7 258 kg (16,000 lb) hoist (single line pull). Actual drilling capacity will depend on in-hole tools and conditions, drilling techniques and equipment used.

	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
	Hole Depth (meters)	Hole Depth (feet)
DRILL ROD/CORE BARREL	Dry Hole <i>(Fluid Filled)</i>	Dry Hole <i>(Fluid Filled)</i>
BRQHP/BQ	1220 (1400)	4000 (4585)
BRQLW/BQTK	1525 (1755)	5000 (5755)
NRQHP/NQ/NQ2"	940 (1080)	3080 (3530)
NRQHP Upset	1110 (1280)	3640 (4190)
HRQHP/HQ	635 (725)	2080 (2380)
HRQHP Upset	870 (1010)	2860 (3305)
HWT/PQ	420 (480)	1370 (1565)

PRIME MOVER

Standard Unit (for altitude ASL)	Cummins QSB 5.9 L, Tier II, turbo charged, after cooled, diesel engine	
Displacement	5.9 L	360 cubic inch
Power (maximum)	153 kW	205 hp
Rated RPM (Factory setting)	2,200 rpm	

TORQUE AND RPM RATINGS	Rpm	Nm	Torque lbft
(Hydraulic motor at maximum/minimum displacement, prime mover at 2200 rpm)			
1st Gear	122 - 199	5 322 - 3 254	3,925 - 2,400
2nd Gear	246 - 400	2 648 - 1 620	1,953 - 1,195
3rd Gear	439 - 714	1 486 - 908	1,096 - 670
4th Gear	769 - 1,250	849 - 519	626 - 383

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	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
HYDRAULIC SYSTEM		
Primary Pump	Axial piston, variable displacement load sensing, pressure compensated with low pressure standby.	
Max Flow	165 Lpm	43.5 Gpm
Maximum Pressure (Factory setting)	31 MPa	4500 psi
Secondary Pump		
	Axial piston, variable displacement load sensing, pressure compensated with low pressure standby.	
Max Flow	64 Lpm	17 Gpm
Maximum Pressure (Factory setting)	21 MPa	3,000 psi
Auxiliary Pump		
	Axial piston, variable displacement, pressure compensated with low pressure standby.	
Max Flow	42 Lpm	11 Gpm
Maximum Pressure (Factory setting)	14 MPa	2,000 psi
DRILL HEAD		
Rotation Motor	Rexroth hydraulic motor - variable/reversible.	
Mechanical Transmission	Funk 4 speed	
Ratios	1st 6.27:1	
	2nd 3.12:1	
	3rd 1.75:1	
	4th 1.00:1	
Final Drive	Straight cut gears.	
Ratio	2:1	
Head Opener	Side shift style — hydraulically actuated	
Hydraulic PQ Chuck	Patented Nitro-Chuck® — hydraulically opened, nitrogen gas spring closed. Axial holding capacity of 222,400 N (50,000 lbf)	

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	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
Drill Head Lubrication	Force fed bearings, oil bath for gears.	
Drill Head Lubricating Oil Filtration	25 Micron high pressure oil filter.	

DRILL MAST AND FEED SYSTEM

Feed Stroke	3.35 m	11 ft
Feed Pull	111 797 N	25,133 lbf
Feed Thrust	58 957 N	13,254 lbf
Rod Pull	3 m (10 ft) or 6 m (20 ft)	
Drilling Angle	45° off horizontal to 90° vertical down.	
Mast Dump (Crowd)	2.34 m	7.7 ft
Mast Telescope	3.35 m	11 ft

DRAWWORKS

Main Line Hoist (Braden)	single speed motor	
Hook Load (single part line)		
Bare Drum	7258 kg	16,000 lb
Hoisting Speed (single part line)		
Bare Drum	53 m/min	173 ft/min
Main Hoist Cable	23 m of 14.3 mm cable	75 ft of 9/16" cable

NOTE: Do not use multiple part lines with the main line hoist, use single part line ONLY.

Wireline Hoist

Line Pull	Bare Drum	993 kg	2,190 lb
	Full Drum	228 kg	502 lb
Line Speed	Bare Drum	145 m/min.	475 ft/min.
	Full Drum	433 m/min.	1,422 ft/min.
Drum Capacity (4.8 mm/3/16" swaged)	1 890 m	6,200 ft	

NOTE: Wireline Cable is not supplied with rig.

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DIMENSIONS AND WEIGHTS *

Wet Weight : 8,392 kg (18,000 lb)

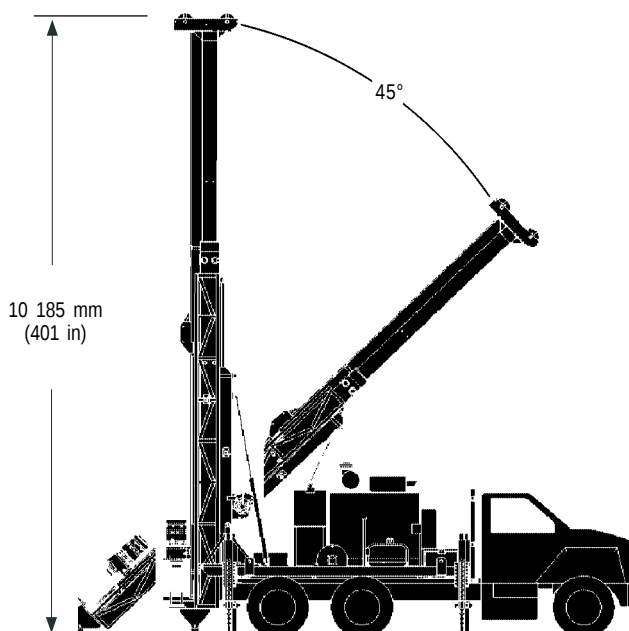
Consists of: Cummins QSB Power Unit Grp.
 Tier II, 5.9 litre 6 cylinder
 Hydraulic Module
 Draw Works Grp. c/w 16000 lb Main Line
 Hoist and Cable, Wireline Hoist less Cable
 Hydraulic Mast Raising
 Hydraulic Mast Dump
 Telescopic Mast Assembly
 Rotation Unit Grp. c/w PQ Chuck/Head
 Guard
 Base Frame
 Fuel Tank (265 L/70 US gal)
 Battery
 Levelling Jacks/Outriggers (Hydraulic)
 Foot Clamp
 Hydraulic Water Pump

Options:

- Truck
- Catwalk, Railing and Access Stairs
- Rod Rack Platform*

Side view of drill with mast in 6 m (20 ft) pull

NOTE: Dimensions are with hydraulic levelling jacks extended to ground level. Levelling jack full stroke is 914 mm (36 in)

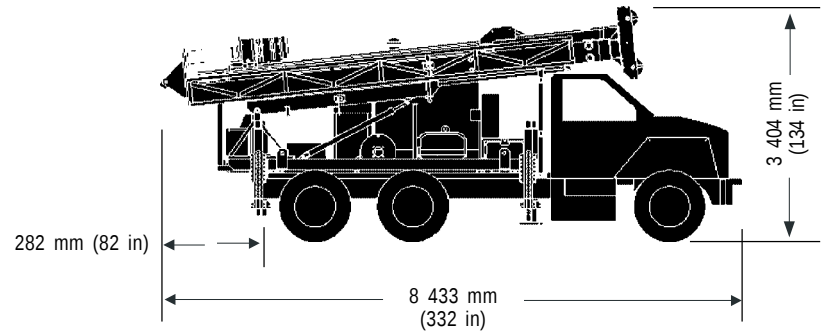


* Dimensions and weights may vary depending on options and should be checked before crating or lifting.

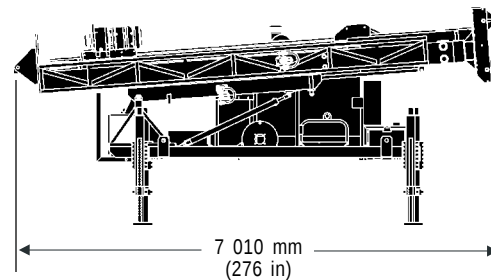
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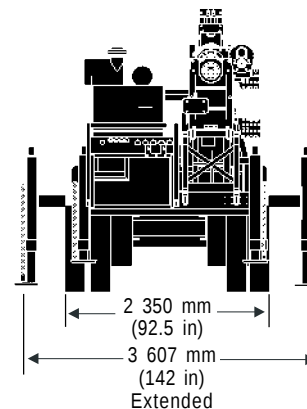
Side view of drill with mast in transport position



Side view of drill with no truck



Rear End View of Drill - Outrigger Detail



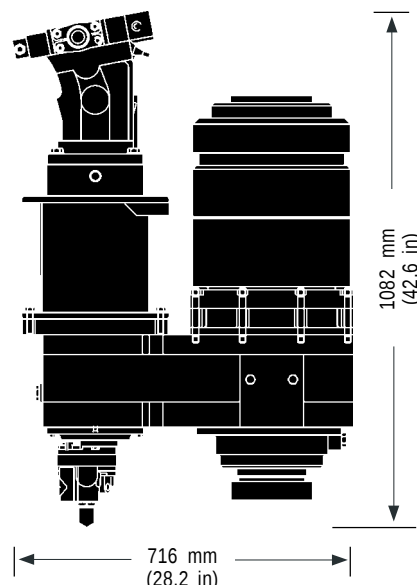
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Drill Head (c/w patented Nitro-Chuck®)

Wet Weight: 658.6 kg (1,452 lb)



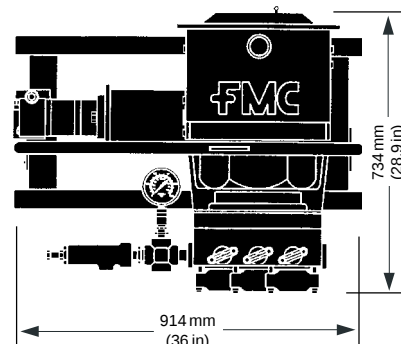
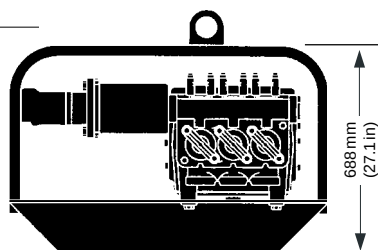
Fluid Circulation Pump Group (W11)

Wet Weight: 259.5 kg (572 lb)

Hydraulically powered from drill hydraulic system.

Consists of: Discharge Assembly
Suction Intake Assembly
Driven Group

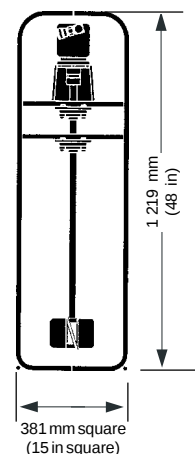
The max. output of the standard single speed motor for the W11 is as follows:
132 Lpm@ 6.9 MPa (35 gpm @ 1000 psi)



Mud Mixer Assembly

Wet Weight: 31 kg (68 lb)

Capacity: 946 L (250 gal)



NOTE: Maximum speed of mud mixer shaft at full flow is 2300 rpm.

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Boart Longyear Inc. is constantly striving to improve its products and must therefore, reserve the right to change designs, materials, specifications and price without notice.

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