

LF70-PQ Head Diamond Core Drill

DRILLING DEPTH GUIDELINES

The figures in these tables have been calculated, based on field experiences, and may be reasonably expected.

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		
BRQHP/BQ	900	3,000
BRQLW/BQTK	1 200	3,800
NRQHP/NQ/NQ2"	700	2,300
HRQHP/HQ	500	1,600
HWT/PQ	300	1,000

NOTE: Ratings are based on a vertical dry hole using a 5 440 kg (12,000 lb) hoist (single line pull).

PRIME MOVER

Standard Unit (for altitude ASL)	Cummins 6BTA5.9 L liquid cooled, turbo charged, after cooled, diesel engine	
Displacement	5.9 L	360 cubic inch
Power (maximum)	149 kW	200 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	Parker 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	4,500 psi
Secondary Pump		
	Parker 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		
	Eaton axial piston, variable displacement, pressure compensated with low pressure standby.	
Max Flow	42 Lpm	11 Gpm
Maximum Pressure (Factory setting)	17 MPa	2,500 psi
DRILL HEAD		
Hollow Spindle - Inside Diameter	127 mm	5 in
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	
Hydraulic PQ 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, external sump.	
Drill Head Lubricating Oil Filtration	25 Micron high pressure oil filter.	

DRILL MAST AND FEED SYSTEM

Feed Stroke	1.83 m (1 830 mm)	6 ft (72 in)
Feed Speeds	Fast and slow with variable control.	
Thrust	62 230 N	13,990 lbf
Pull	78 604 N	17,671 lbf
Rod Pull	3 m (10 ft) or 6 m (20 ft)	
Drilling Angle	30° off horizontal to 90° vertical down.	

DRAWWORKS

Main Line Hoist (KPL12)

Hook Load (single part line)

Bare Drum	5 440 kg	12,000 lb
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Hoisting Speed (single part line)

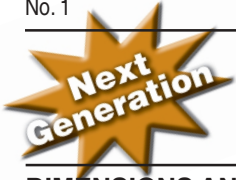
Bare Drum	81 m/min	267 ft/min
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Main Hoist Cable	23 m of 16 mm cable	75 ft of 5/8" cable
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NOTE: Do not use multiple part lines with the 12,000 lb hoist, use single part line ONLY.

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.
Cable Capacity (maximum) (4.8 mm/3/16" swaged)	1 890 m	6,200 ft	



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DIMENSIONS AND WEIGHTS *

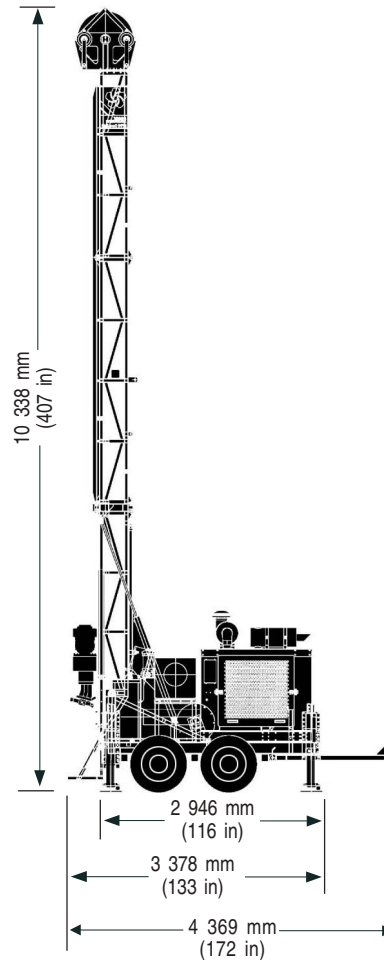
Wet Weight : 5 656 kg (12,469 lb)

Consists of: Cummins 6BTA Power Unit Grp.
 - 5.9 litre 6 cylinder
 Hydraulic Module
 Draw Works Grp. c/w Cable
 Hydraulic Mast Raising (independent)
 Lower Mast Assembly
 Middle and Upper Mast Assembly
 Rotation Unit Grp. c/w PQ Chuck
 Base Frame
 Fuel Tank (190 L/50 US gal)
 Battery
 Levelling Jacks (Hydraulic)
 Operator Platform
 Towing Group
 Foot Clamp
 Rotation/Chuck Guard

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

Dimensions: Deduct 3 225 mm (127") if Middle Mast section is removed for 3 m (10 ft) configuration

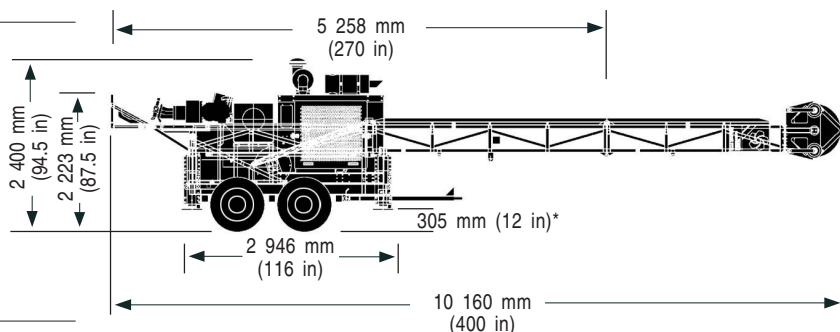
NOTE: Dimensions are with hydraulic levelling jacks extended to ground level. Levelling jack full stroke is 520 mm (20.5 in) allowing 216 mm (8.5 in) ground clearance.



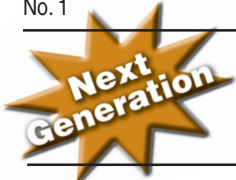
Side view of drill with mast in 20 ft (6 m) pull horizontal position

Dimensions: Deduct 3 225 mm (127") from overhang if Middle Mast section is removed

NOTE: * Dimensions are with hydraulic levelling jacks retracted.



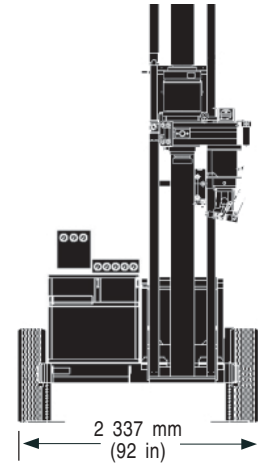
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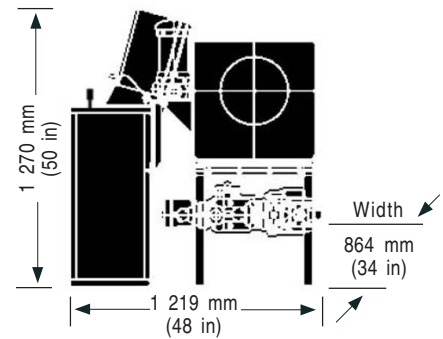
DIMENSIONS AND WEIGHTS *

Rear End View of Drill
(includes all mast sections)



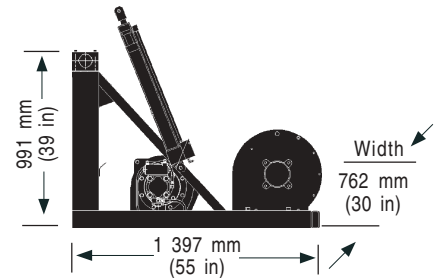
Hydraulic Module

Wet Weight: 639.6 kg (1,410 lb)



Draw Works Module - without cable

Wet Weight: 524.4 kg (1,156 lb)



Cable Weights

Main Line Hoist Cable

15.9 mm x 23 m (5/8" x 75 ft), single part line - 30 kg (66 lb)

Wireline Hoist Cable

4.8 mm x 1 219 m (3/16" x 6,200 ft) - 208 kg (459 lb)

(Lengths above do not represent the max. rated drum capacity, they are typical values only.)

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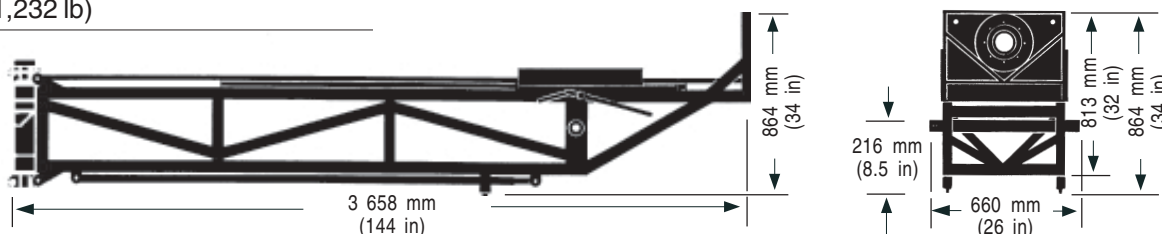


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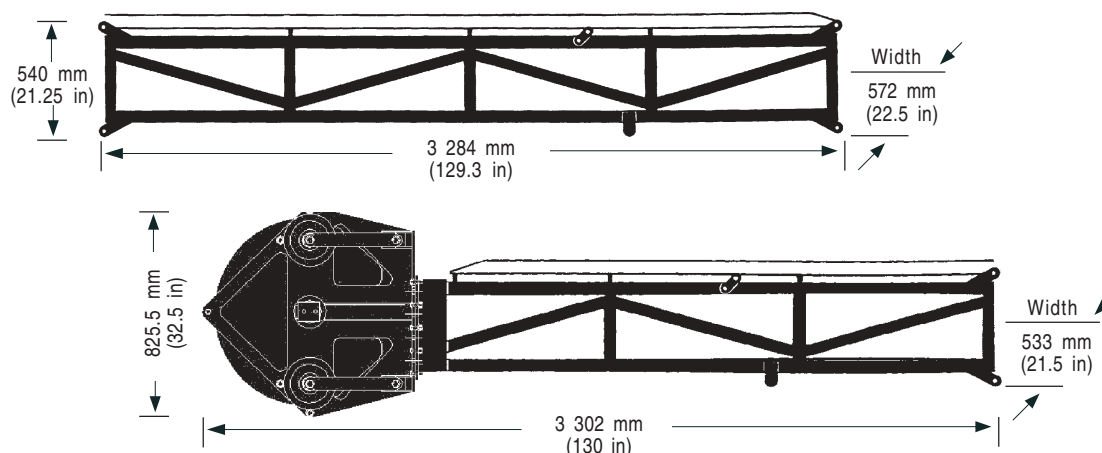
Lower Mast Section c/w removable bulk head/hoses

Weight: 559 kg (1,232 lb)



Middle and Upper Mast Sections

Combined Weight: 429 kg (946 lb)



Drill Base (bare)	589.7 kg	(1,300 lb)
Dual Axle and Wheels (4)	299.4 kg	(660 lb)
Towing Hitch	69.9 kg	(154 lb)
Fuel Tank (dry) (190 L/50 US gal)	39.9 kg	(88 lb)
Battery Box (incl wet battery)	69.9 kg	(154 lb)
Hyd. Levelling Jacks (4) Wet	319.3 kg	(704 lb)
Bulkhead and Hoses	79.8 kg	(176 lb)
Telescopic Rod Guard	129.7 kg	(286 lb)
Operator Platform	16.3 kg	(36 lb)

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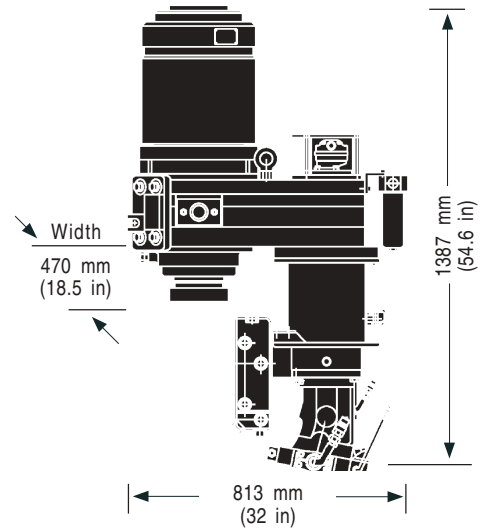


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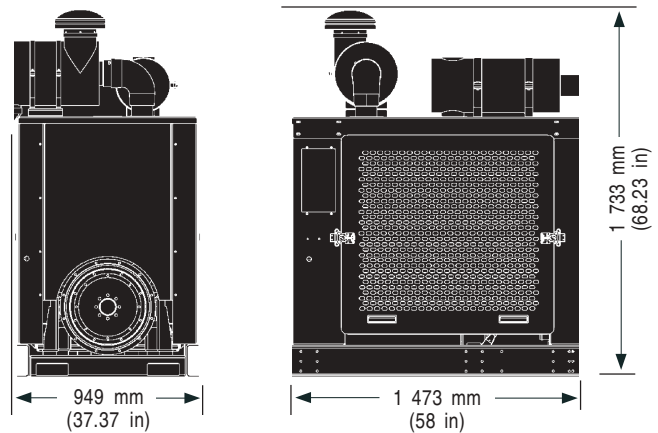
Drill Head (c/w PQ Chuck)

Wet Weight: 658.6 kg (1,452 lb)

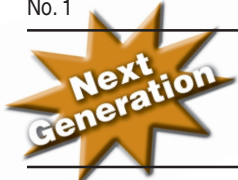


Diesel Engine Module (Cummins 6BTA)

Wet Weight: 916.7 kg (2,021 lb)



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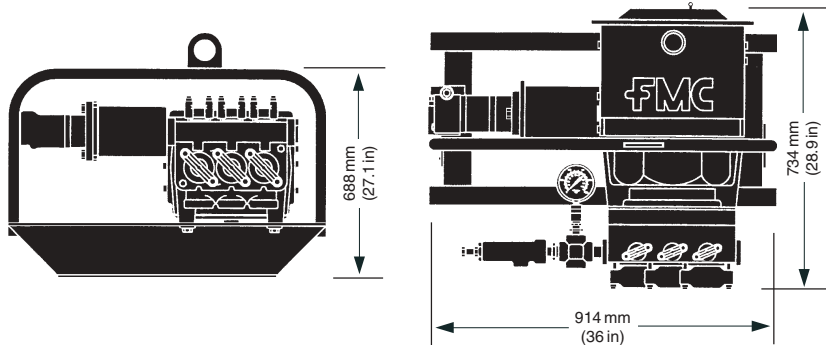
Fluid Circulation Pump Group (W11)

Wet Weight: 259.5 kg (572 lb)

Hydraulically powered from drill hydraulic system.

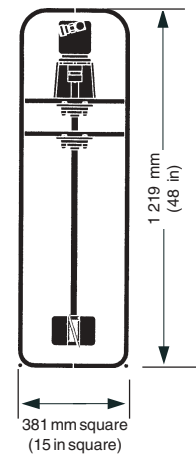
Consists of: Discharge Assembly
Suction Intake Assembly
Driven Group

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)



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

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