LF70-HQ Diamond Core Drill System

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 (metres)	Hole Depth (feet)
DRILL ROD/CORE BARREL	Dry Hole ***(Fluid Filled)***	Dry Hole ***(Fluid Filled)***
BRQHP/BQ	915 ***(1050)***	3000 ***(3440)***
BRQLW/BQTK	1145 ***(1320)***	3750 ***(4320)***
NRQHP/NQ/NQ2"	705 ***(810)***	2310 ***(2650)***
NRQHP Upset	830 ***(960)***	2730 ***(3140)***
HRQHP/HQ	475 ***(545)***	1560 ***(1785)***
HRQHP Upset	655 ***(755)***	2145 ***(2480)***
HWT/PQ	315 ***(360)***	1025 ***(1175)***

PRIME MOVER		
Standard Unit	Deutz BF4L913, 4 cylinder, air cooled, turbocharged diesel engine.	
Displacement	4.08 L	249 cubic inch
Net Power (intermittent)	79 kW	106 hp
Continuous Output	65 kW	87 hp
Max Rated RPM	2,500 rpm	

Optional Unit (for altitude ASL)	Deutz BF6L913, 6 cylinder, air cooled, turbocharged diesel engine.	
Displacement	6.13 L	374 cubic inch
Net Power (intermittent)	119 kW	160 hp
Continuous Output	99 kW	132 hp
Max Rated RPM	2,500 rpm	

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	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
HYDRAULIC SYSTEM		
Primary Pump	Eaton axial piston, variable displacement, pressure compensated with low pressure standby.	
Max Flow	163 Lpm	43 Gpm
Maximum Pressure (As used on LF 70)	24.1 MPa	3,500 psi
Secondary Pump	Eaton axial piston, variable displacement, pressure compensated.	
Max Flow	41.6 Lpm	11 Gpm
Maximum Pressure (As used on LF 70)	13.8 MPa	2,000 psi
Auxiliary Pump	Eaton axial piston, hydrostatic drive with manual swash plate control.	
Max Flow	38 Lpm	10 Gpm
Maximum Pressure (As used on LF 70)	14 MPa	2,000 psi
DRILL HEAD		
Hollow Spindle - Inside Diameter	95.2 mm	3-3/4 in
Rotation Motor	Rexroth hydraulic motor - variable/reversible.	
Mechanical Transmission	Funk 4 speed	
Ratios	1st 6.63:1	
	2nd 3.17:1	
	3rd 1.72:1	
	4th 1.00:1	
Final Drive	Roller chain drive.	
Ratio	2.58:1	
Hydraulic HQ Chuck	Hydraulically opened, spring closed.	

TORQUE AND RPM RATINGS lbft	**Rpm**	**Nm**	**Torque**
(Hydraulic motor at minimum displacement, prime mover at 2200 rpm)			
1st Gear	190	2 305	1,700
2nd Gear	400	1 085	800
3rd Gear	730	610	450
4th Gear	1,250	340	250

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	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
TORQUE AND RPM RATINGS lbft	**Rpm**	**Nm Torque**
(Hydraulic motor at maximum displacement, prime mover at 2200 rpm)		
1st Gear	95	4 610 3,400
2nd Gear	200	2 170 1,600
3rd Gear	370	950 700
4th Gear	630	680 500

Drill Head Lubrication	Force fed bearings, oil bath for roller chain.
Drill Head Lubricating Oil Filtration	10 Micron spin-on type oil filter.

DRILL MAST					
Lower Section	**Feed Stroke**	1 830	mm	72	in
	Length	3 213	mm	126.5	in
Middle Section					
	Length	3 284	mm	129.3	in
Upper Section					
	Length	2 705	mm	106.5	in

DRAW WORKS				
Main Line Hoist (KPL12)				
Hook Load (single part line)				
Bare Drum	5 450	kg	12,000	lbf
Full Drum	3 720	kg	8,200	lbf
Hoisting Speed (single part line)				
Bare Drum	59	m/min	193	ft/min
Full Drum	80	m/min	261	ft/min
Cable Capacity (maximum)	67	m of 16 mm cable	220	ft of 5/8" cable

NOTE: Do not use multiple part lines with the 12,000 lb hoist, use single part line ONLY.

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		METRIC SYSTEM		U.S. CUSTOMARY SYSTEM	
Wireline Hoist					
Line Pull	**Bare Drum**	990	kg	2,190	lbf
	Full Drum	277	kg	502	lbf
Line Speed	**Bare Drum**	100	m/min.	337	ft/min.
	Full Drum	443	m/min.	1,470	ft/min.
Cable Capacity (swaged)		1 898	m of 4.8 mm cable	6,200	ft of 3/16" cable
FEED CYLINDER					
Pull Capacity	**@ 2000 psi**	6 414	kg	14,137	lbf
Thrust Capacity	**@ 2000 psi**	4 231	kg	9,326	lbf

LF70-HQ Diamond Core Drill System

DIMENSIONS AND WEIGHTS *

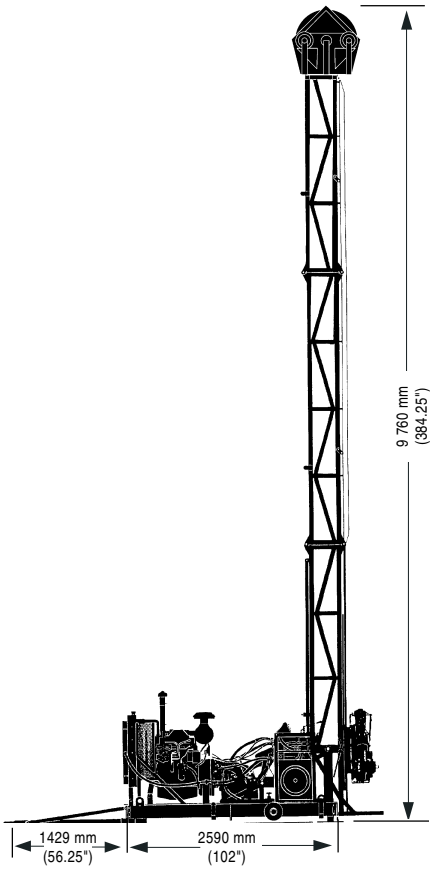
Side view of drill with mast in vertical position

Dimensions: Deduct 3 235 mm (127.4") if Middle Mast section is removed

NOTE: Base dimensions are with mechanical stabilizer legs at the uppermost position. Overall height can be increased by 24,7 cm (9-3/4") by adjusting legs downwards.

Wet Weight : 3 220 kg (6,500 lb)

Consists of: Deutz BF4L 913 Power Unit Grp.
Hydraulic Module
Draw Works Grp. c/w Cable
Lower Mast Assembly
Middle and Upper Mast Assembly
Rotational Unit Grp. c/w Auto Chuck
Base Frame Bare
Fuel Tank (Wet)
Battery
Stabilizer Legs (25 ea. x 4)
Operator Platform

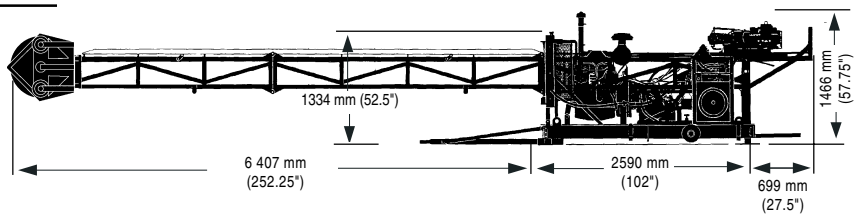


Side view of drill with mast in horizontal position

Dimensions: Deduct 3 235 mm (127.4") from overhang if Middle Mast section is removed

Wet Weight: 3 220 kg (6,500 lb)

NOTE: Base dimensions are with mechanical stabilizer legs at the uppermost position. Overall height can be increased by 24.7 cm (9-3/4") by adjusting legs downwards.



* Dimension and weights are nominal and Should be checked before crating or lifting. Conversion factors have been used to convert from Imperial to Metric measures.

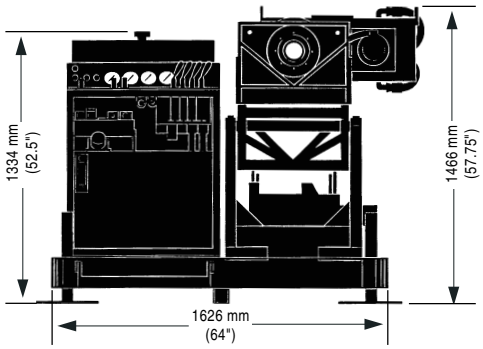
LF70-HQ Diamond Core Drill System

DIMENSIONS AND WEIGHTS *

Rear End View of Drill (includes all mast sections)

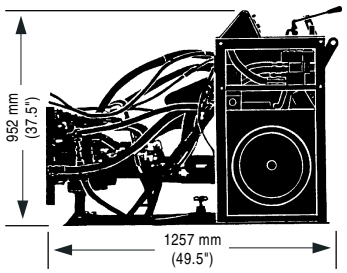
Wet Weight: 2 948 kg (6,500 lb)

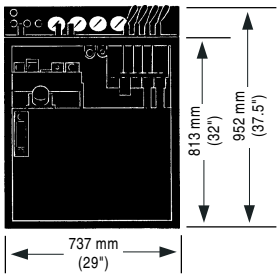
NOTE: Base dimensions are with mechanical stabilizer legs at the uppermost position. Overall height can be increased by 24.7 cm (9-3/4") by adjusting legs downwards.



Hydraulic Module

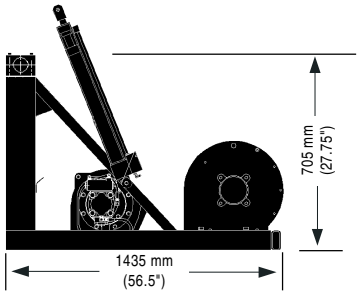
Wet Weight: 417 kg (920 lb)





Draw Works Module (KPL12)

Weight: 360 kg (795 lb)
Without cable



Cable Weights

Main Line Hoist Cable

15.9 mm x 22.9 m (5/8" x 75 ft), single part line - 26 kg (58 lb)

Wireline Hoist Cable

4.8 mm x 1 280 m (3/16" x 4,200 ft) - 118 kg (260 lb)

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

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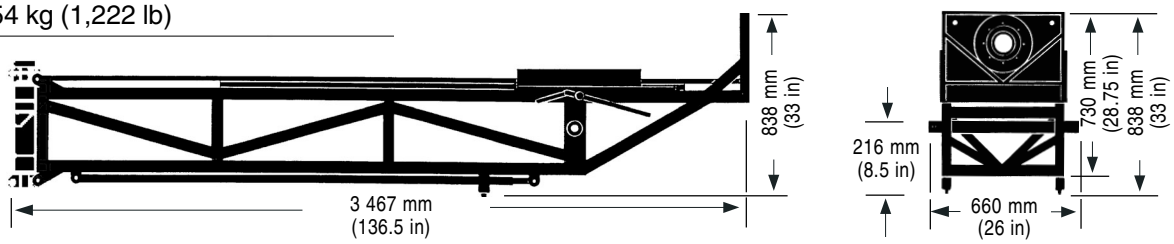
LF70-HQ Diamond Core Drill System

DIMENSIONS AND WEIGHTS *

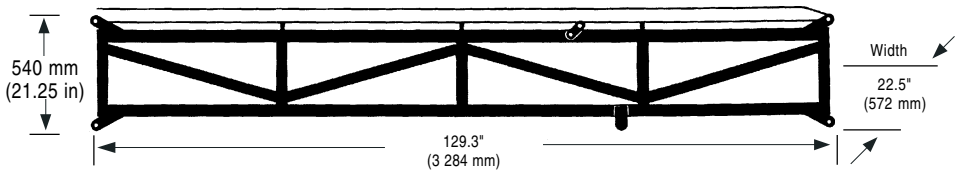
Lower Mast Section

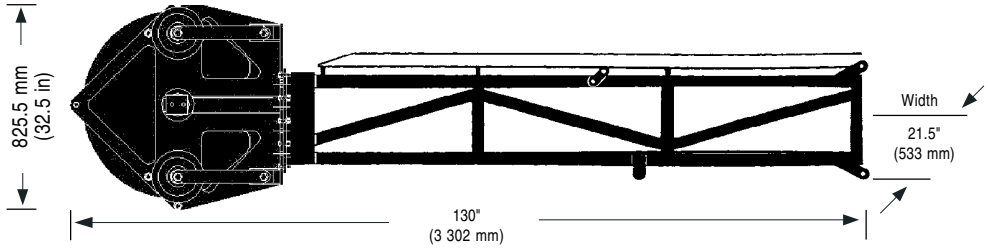
Weight: 554 kg (1,222 lb)



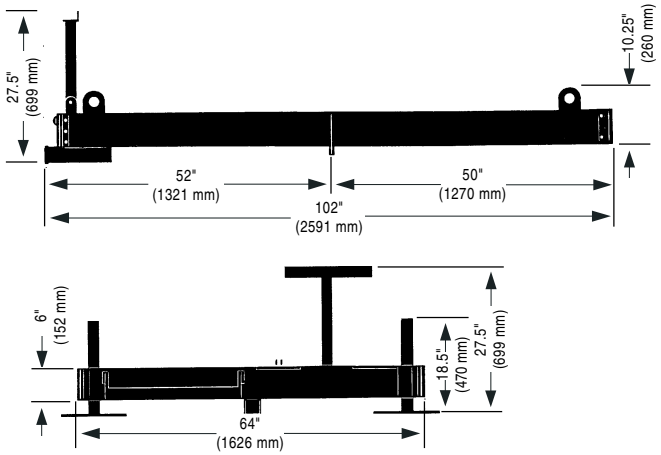
Middle and Upper Mast Sections

Combined Weight: 800 lb (363 kg)





Drill Base (bare)	630 lb	(286 kg)
Wheel and Stub Axle (each)	112 lb	(51 kg)
Towing Hitch	55 lb	(25 kg)
Fuel Tank (wet)	125 lb	(57 kg)
Battery Box (inlcuding battery)	134 lb	(61 kg)
Mud Tank Outriggers (each)	26 lb	(12 kg)
Stabilizer Legs (each)	25 lb	(11 kg)
Operator Platform	26 lb	(12 kg)



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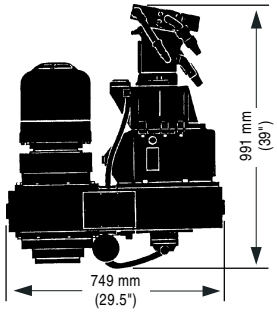
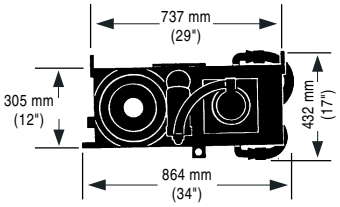
DIMENSIONS AND WEIGHTS *

Drill Head (c/w Auto Chuck)

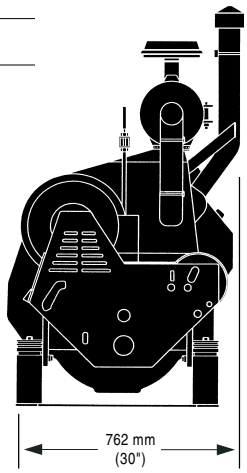
Dry Weight: 376 kg (830 lb)

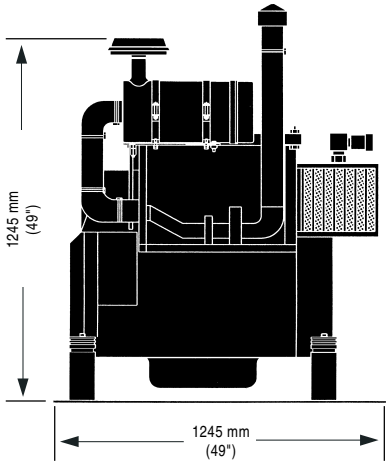




Diesel Engine Module (Deutz BF4L913)

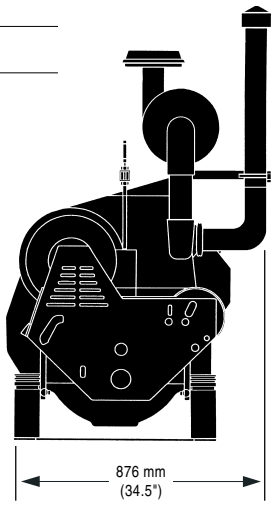
Dry Weight: 496 kg (1,094 lb)

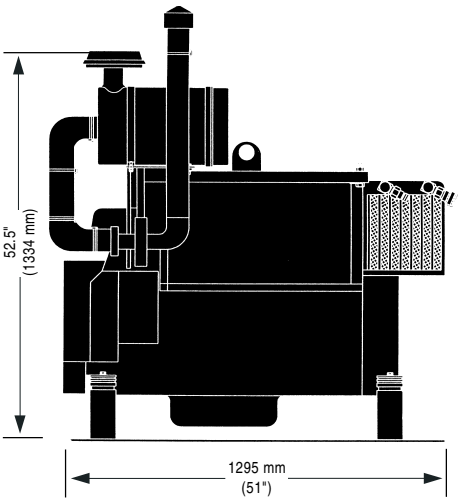




Diesel Engine Module (Deutz BF6L913)

Dry Weight: 646 kg (1,424 lb)





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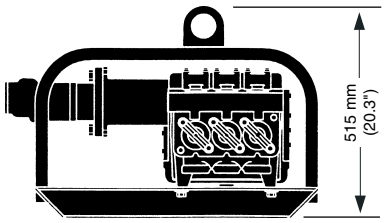
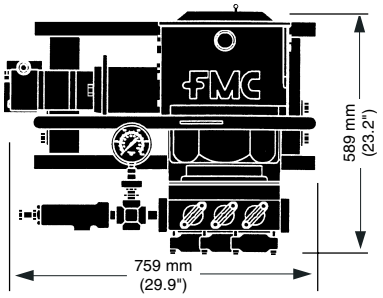
DIMENSIONS AND WEIGHTS *

Fluid Circulation Pump Group (L09)

Wet Weight: 145 kg (320 lb)

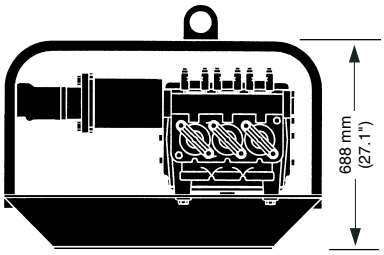


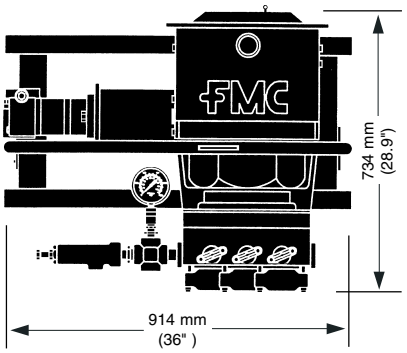


The max. output of the standard 2-speed motor for the L09 is as follows:
High vol./low pres. - 20 gpm @ 300 psi
Low vol./high pres. - 10 gpm @ 800 psi

Fluid Circulation Pump Group (W11)

Wet Weight: 254 kg (560 lb)



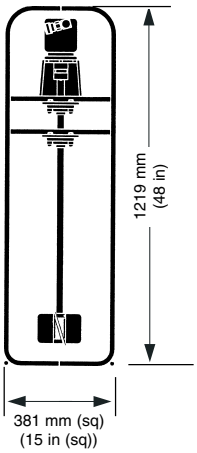


The max. output of the standard 2-speed motor for the W11 is as follows:
High vol./low pres. 35 gpm @ 300 psi 6.2 hp
Low vol./high pres. 17 gpm @ 800 psi 7.9 hp

If a higher output pressure system is required an optional 2-speed motor can be supplied with the following max. output:
High vol./low pres. 23 gpm @ 950 psi 12.7 hp
Low vol./high pres. 11 gpm @ 1000 psi 6.4 hp

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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