

LF-70F (Fly Base) Core Drill Specifications

Note: The maximum depth capacity of this core rig depends on several factors, primarily the mechanical limits of the drill string, including the pipe grade, connection strength, and safety factors.

The Alaska Drilling and Completions (ADC) LF-70 Diamond Core Drill Rig is a lightweight, high-performance drilling unit designed specifically for helicopter-supported, skid-mounted, or tow-behind operations in ultra-remote and rugged terrain. Renowned for its versatility and portability, the LF-70 can be broken down quickly into modular components for rapid mobilization and reassembly in the field which makes it ideal for hard-to-access exploration sites. The rig features a dependable hydraulic system, precision feed control, and optional rod handling assist to enhance safety and efficiency. Whether being slung by helicopter or moved by support equipment, the ADC LF-70 delivers reliable performance even in the most challenging drilling environments.

Depth Capacity	
Drill Rod / Core Barrel	Fluid Filled
BQ	3,407 Feet / 1,039 Meters
NQ	2,619 Feet / 798 Meters
HQ	1,778 Feet / 542 Meters
PQ	1,171 Feet / 357 Meters

Power Unit	
Engine	Cummins QSB 4.5 L, 4 cylinder, turbo charged, after cooled diesel engine
Size	4.5 L / 275 Cubic Inch
Horse Power (HP)	171 HP @ 2,200 RPM
Cooling	Water Cooled

Hydraulic System		
Primary Pump	Axial piston, variable displacement load sensing, pressure compensated with low pressure standby	
Max Flow	43 gpm	163 L/m
Max Pressure	3,500 psi	24 MPa
Secondary Pump	Axial piston, variable displacement load sensing, pressure compensated with low pressure standby	
Max Flow	11 gpm	42 L/m
Max Pressure	2,000 psi	14 MPa
Auxiliary Pump	Axial piston, variable displacement load sensing, pressure compensated with low pressure standby	
Max Flow	10 gpm	38 L/m
Max Pressure	2,000 psi	14 MPa
Hydraulic Tank Capacity	38 Gal	144 L

PQ Drill Head			
Type	Hollow Spindle		
Size	P, Accepts up to 122 mm / 5 In		
Chuck	Hydraulic		
Rotation Motor	Rexroth hydraulic motor - variable/reversible		
Transmission	Funk 4 Speed / Mechanical		
Transmission Gear Ratio	1st Gear	6.27:1	
	2nd Gear	3.12:1	
	3rd Gear	1.75:1	
	4th Gear	1.00:1	
RPM / Torque	Gear	RPM	Torque / lbft
	1st	122 - 199	3,878 - 2,027
	2nd	246 - 400	1,929 - 1,008
	3rd	439 - 714	1,084 - 567
PU @ 2,200 RPM (No Load)	4th	769 - 1,250	658 - 344

Feed System / Drill Mast	
Feed Stroke	6 Feet / 2 Meters
Pull Capacity @ 2,000 psi	14,137 lbf / 6,414 kg
Thrust Capacity @ 2,000 psi	9,326 lbf / 4,231 kg
Rod Pull	10 or 20 Feet / 3 or 6 Meters
Drilling Angle	45° off horizontal to 90° vertical down
Foot Clamp	PWT

Hoists		
Main Line Max Pull	12,000 lbs	5,450 kg
Speed / Bare Drum	3 ft/sec	1 m/sec
Wireline / Bare Drum	2,190 lb	988.2 kg
Speed/ Bare Drum	337 ft/min	100 m/min
Capacity (.250 cable)	4,200 feet	1,280 meters

Accessories
PQ Rotation Unit Grp. c/w Nitro-Chuck®
Mast raising cylinders
Wireline cable
Mud tank
Towing package - NOTE: Not highway rated
Fluid circulation pumps (diesel supply and pressure)
Mud mixer
Two Fly Bases

Weights (list of individual loads available)		
Max "Dry" Weight	8,245 lbs	3,740 kg

ADC's LF-70F Diamond Core Rig with Fly Base on Location

