

# LM™ 30 Modular Core Drill

## Technical Data Sheet



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### PRODUCT OVERVIEW

The LM™ 30 Modular Core Drill has been developed for ease of use in tight situations and locations where mobility and quick setup time are important.

Size and weight were the prime concerns when developing this small, lightweight drill rig.

#### FEATURES:

- PLC control system, which includes EPROM protection
- 400 series feed frame
- Auto break out
- 37kW Power Pack
- Spring close foot clamp
- 360° turntable
- Dumping feed frame
- Regen circuit to ensure feed speed is maintained.



### 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, conditions,

drilling techniques and equipment used. Depth ratings include allowances for breaking of the core (rock strength 10MPa). Down hole conditions may result in depth capacity variations.

BQ DRILL HEAD	HOLE DEPTH (METERS)			HOLE DEPTH (FEET)		
	Up	Horizontal	Down	Up	Horizontal	Down
LTK48 (AWJ 14.5kg/3m rod)	300	750	500	984	2,461	1,641
LTK60 (BWJ 18.0kg/3m rod)	260	475	300	853	1,558	984
LTK48 (AWJLT 10.4kg/3m rod)	450	1100	700	1,476	3,609	2,297
LTK60 (BWJLT 16.4kg/3m rod)	275	550	350	902	1,805	1,148
BRQ/BQ (18.0kg/3m rod)	320	450	400	1,050	1,476	1,312

HQ DRILL HEAD	HOLE DEPTH (METERS)			HOLE DEPTH (FEET)		
	Up	Horizontal	Down	Up	Horizontal	Down
NRQ/NQ (23.4kg/3m rod)	265	650	180	869	2,133	591
HRQ/HQ (34.5kg/3m rod)	180	300	50	591	984	164

Note: depth capacity includes allowance for force required to break core using 10 MPa rock strength.

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### TECHNICAL SPECIFICATIONS

	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
<b>POWER PACK</b>		
<b>Standard Unit</b>	Electric motor and Starter	
Power	37 kW	50 hp
<b>FEED FRAME (400 SERIES)</b>		
<b>Feed stroke</b>	1,700 mm or 1,100 mm	5.5 ft or 3.6 ft
<b>Max. rated pushing force</b>	42 kN @ 26 MPa	9,440 lbf @ 3,770 PSI
<b>Max. rated pulling force</b>	40.3 kN @ 26 MPa	9,060 lbf @ 3,770 PSI
<b>Rated carriage speed</b>	0.5 m/s per complete cycle	1.64 ft/s per complete cycle
<b>Normal rod handling speed</b>	Approx. 15 m/min (actual rod handling speed may vary with working conditions)	Approx. 50 ft/min (actual rod handling speed may vary with working conditions)
<b>Note</b>	Feed cylinder cushioned at both ends. Dual load holding valves.	
<b>CHUCK AND ROD HOLDER (BQ)</b>		
	<b>BQ Chuck</b>	<b>BQ Rod Holder</b>
<b>Maximum opening</b>	60.0 mm (2.86 in) Diameter corresponding to the ID of the LTK60 guide bush	60.0 mm (2.36 in) Diameter corresponding to the ID of the LTK60 guide bush
<b>Type</b>	Closed hydraulically Opened mechanically Automatic synchronization w/rod holder	Closed mechanically Opened hydraulically Automatic synchronization with chuck Manual overdrive
<b>Jaws</b>	3, with tungsten carbide inserts	2, with tungsten carbide inserts
<b>Max. rated axial holding capacity</b>	Forward and reverse rotation 75.0 kN* (16,600 lbf*)	Forward and reverse rotation 60.0 kN* (13,300 lbf*)
<b>Max. rated static torsional holding capacity</b>	520 N-m (383 lbf)*	1,670 N-m (1,230 lbf)*
<i>*at 7 MPa (1,015 PSI) with new jaws and rods.</i>		
<b>CHUCK AND ROD HOLDER (HQ)</b>		
	<b>HQ Chuck</b>	<b>HQ Rod Holder</b>
<b>Maximum opening</b>	97.0 mm (3.82 in) Diameter corresponding to the ID of the HQ guide bush	97.0 mm (3.82 in) Diameter corresponding to the ID of the HQ guide bush
<b>Type</b>	Closed hydraulically Opened mechanically Automatic synchronization w/rod holder	Closed mechanically Opened hydraulically Automatic synchronization with chuck Manual overdrive
<b>Jaws</b>	3, with tungsten carbide inserts	2, with tungsten carbide inserts
<b>Max. rated axial holding capacity</b>	80.0 kN* (17,985 lbf*)	80.0 kN* (17,985 lbf*)
<b>Max. rated static torsional holding capacity</b>	Forward and reverse rotation 3,900 N-m (2,870 lbf)*	Forward and reverse rotation 3,900 N-m (2,870 lbf)*
<i>*at 7 MPa (1,015 PSI) with new jaws and rods.</i>		

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### TECHNICAL SPECIFICATIONS

	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
<b>DRILL HEAD (BQ)</b>		
<b>Forward Rotation</b>		
Chuck Speed	2,300 RPM, continuously variable. Speeds will vary with oil type and temperature are only approximate	
Chuck torque output	65 N-m @ 1,700 RPM 400 N-m @ 600 RPM	48 lb-ft @ 1,700 RPM 295 lb-ft @ 600 RPM
<b>Reverse Rotation</b>		
Chuck Speed	45 RPM, Fixed to help prevent rod thread damage	
Chuck torque output	1,230 N-m @ 26 MPa with break-out device	910 ft-lb @ 3,770 psi with break-out device
<b>DRILL HEAD (HQ)</b>		
<b>Forward Rotation</b>		
Chuck Speed	1,650 RPM, continuously variable. Speeds will vary with oil type and temperature are only approximate	
Chuck torque output	135 N-m @ 1,100 RPM 500 N-m @ 500 RPM	100 ft-lb @ 1,100 RPM 370 ft-lb @ 500 RPM
<b>Reverse Rotation</b>		
Chuck Speed	60 RPM, Fixed to help prevent rod thread damage	
Chuck torque output	1,825 N-m @ 26 MPa with break-out device	1,350 lb-ft @ 3,770 psi with break-out device
<b>HYDRAULIC SYSTEM</b>		
<b>Main Pump</b>		
Main Pump	All drill functions	
Main Pump	Variable displacement, axial piston w/pressure compensated load sensing control	
Manufacturer	Rexroth (Hydromatik Gmbh)	
Maximum pressure operating conditions as used on LM30 drill:	30 MPa, forward rotation, reverse rotation and rod handling	4,350 PSI, forward rotation, reverse rotation and rod handling
<b>Recirculation pump</b>		
Recirculation pump	Oil cooling	
Type	Gear, fixed displacement	
Manufacturer	Rexroth (Hydromatik Gmbh)	
Maximum pressure operating conditions as used on LM30 drill:	3 Bar	43 PSI
Normal speed	1,475 RPM @ 50 Hz	
	1,770 RPM @ 60 Hz	
Hydraulic tank volume	160 L	42.3 US Gal.
<b>WATER PUMP</b>		
<b>Variable speed hydraulically driven piston pump</b>		

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### TECHNICAL SPECIFICATIONS

		METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
<b>WIRELINE HOIST (OPTIONAL)</b>			
<b>Variable speed hydraulically driven c/w 500 m (1,640 ft) cable</b>			
Type	All hydraulic, with proportional spooling control Power up, power down, hydraulically locked in neutral Free wheel override, chain driven spooling device.		
Line Pull			
	Bare Drum	11.77 kN	2,649 lb
	Full Drum	4.51 kN	1,015 lb
Line Speed			
	Bare Drum	0 - 100 m/min	328 ft/min
	Full Drum	0 - 254 m/min	833 ft/min
Drum Capacity			
	5 mm	1400 m	4,600 ft
	6 mm	1000 m	3,280 ft
	1/4"	895 m	2,930 ft

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### DIMENSIONS AND WEIGHTS\*

#### FEED FRAME (400 SERIES)

##### Feed Frame

Weight: 650 kg (1,430 lbs)

##### Rotation Unit w/chuck

Weight: 235 kg (517 lbs)

##### HQ rod clamp ass'y

Weight: 75 kg (165 lbs)

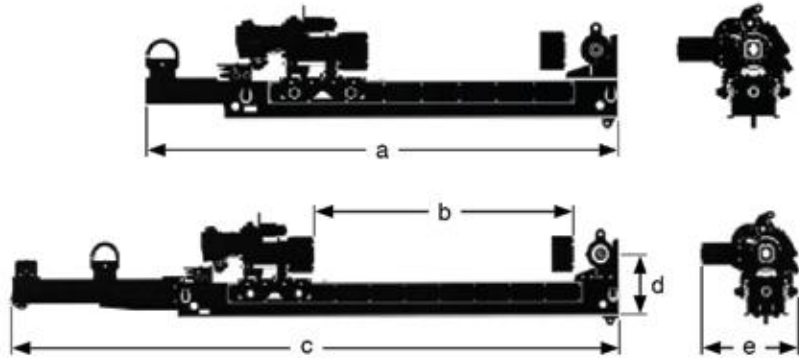
**a = 2,805 mm (110.50 in)**

**b = 1,700 mm (67.00 in)**

**c = 3,493 mm (137.50 in)**

**d = 531 mm (21.00 in)**

**e = 748 mm (28.50 in)**



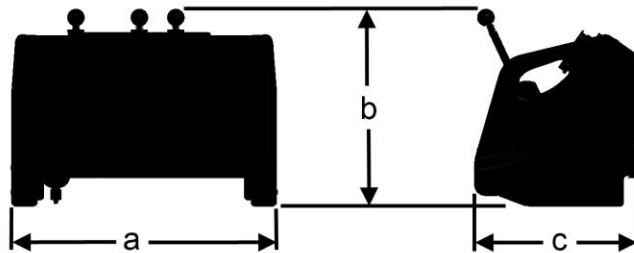
#### CONTROL PANEL

Weight: 40 kg (88 lbs)

**a = 600 mm (23.6 in)**

**b = 445 mm (17.5 in)**

**c = 370 mm (14.5 in)**



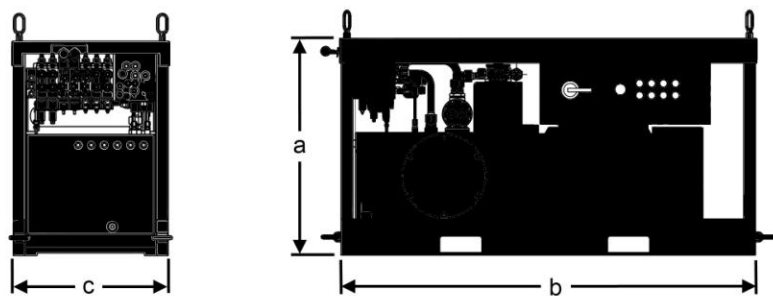
#### POWER PACK

Weight: 1,010 kg (2,227 lbs)  
inc. electric motor and starter

**a = 905 mm (35.6 in)**

**b = 1,750 mm (68.9 in)**

**c = 650 mm (25.5 in)**



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