LM55 Modular Diamond 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.

These variable factors will cause changes to depth obtained. No claim is made for products listed that are not produced by the Boart Longyear Company to perform at these depths.

Please refer to specification tables for available thrust, pull and torque to aid in estimating capacities for your specific application.

USING CHAIN COUPLED FEED FRAME

	Metric System			U.S. Customary System		
	Hole direction (metres)			Hole direction (feet)		
Coring System	Vertical Up	Horizontal	Vertical Down	Vertical Up	Horizontal	Vertical Down
AQTK	890	880	1400	2920	2890	4590
AQ, AQ-U	740	650	1040	2430	2130	3410
BQTK	640	620	990	2100	2030	3250
BQ, BQ-U	540	460	730	1770	1510	2400
NQ, NQ-U	360	360	570	1180	1180	1870
HQ, HQ-U	200	200	320	660	660	1050

USING DIRECT COUPLED FEED FRAME

	Metric System			U.S. Customary System		
	Hole direction (metres)			Hole direction (feet)		
Coring System	Vertical Up	Horizontal	Vertical Down	Vertical Up	Horizontal	Vertical Down
AQTK	590	880	1410	1930	2890	4620
AQ, AQ-U	490	650	1040	1610	2130	3410
BQTK	420	620	990	1380	2030	3247
BQ, BQ-U	360	460	730	1180	1510	2390
NQ NQ-U	220	360	570	720	1180	1870
HQ, HQ-U	110	200	320	360	650	1050

PRIME MOVER

Installed Capacity	standard: 55kW (75 hp) electric motor optional: diesel power units

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BOART LONGYEAR

TECH DATA

DIAMOND CORE DRILLING

LM55 Modular Diamond Drill System

HYDROSTATIC PUMPS	Main Pump	Recirculation Pump
Type	Variable Displacement Axial Piston with pressure compensated load sensing control.	Fixed displacement gear
Manufacturer	Rexroth (Hydromatik GmbH)	Rexroth (Hydromatik GmbH)
Working conditions and maximum pressure as used on LM55 drill:	28.5 MPa (4135 psi) Forward rotation, reverse rotation, and rod handling	5 bar (72 psi) Oil cooling and charge pump
Normal speed	1450 rpm (50 hz) 1750 rpm (60 hz)	
Hydraulic tank volume	66L (17.4 U.S. gallons)	

FEED FRAME CHAIN COUPLED	
Feed length:	1800 mm (71 in)
Max. rated pushing force:	66.5 kN @ 26 MPa (14,960 lbf @ 3770 psi)
Max. rated pulling force:	66.5 kN @ 26 MPa (14,960 lbf @ 3770 psi)
Rated carriage speed:	0.75 m/sec (30 in/sec)
Normal rod handling speed:	Approx. 16 m/min (52 ft/min) using 3 metre (10ft) rods

FEED FRAME DIRECT COUPLED	
Feed length:	1800 mm (71 in)
Max. rated pushing force:	49.3 kN @ 26 MPa (11,090 lbf @ 3770 psi)
Max. rated pulling force:	74.3 kN @ 26 MPa (16,700 lbf @ 3770 psi)
Rated carriage speed:	0.91 m/sec (36 in/sec)
Normal rod handling speed:	Approx. 18 m/min (60 ft/min) using 3 metre (10ft) rods

HQ CHUCK AND ROD HOLDER	Chuck	Rod Holder
Maximum opening	97.0 mm (3.82 in) diameter	97.0 mm (3.82 in) diameter
Type	Closed hydraulically Opened mechanically Automatic synchronization with rod holder	Closed mechanically Opened hydraulically Automatic synchronization with chuck Manual override
Jaws: Quantity	3, with tungsten carbide inserts	2, with tungsten carbide inserts
Max. rated axial holding capacity ▼	Forward and Reverse rotation 130 kN (29,250 lbf)	130 kN (29,250 lbf)
Max. rated static torsional holding capacity ▼	3900Nm (2870 lbf ft)	3900Nm (2870 lbf ft)
	▼ at 7 MPa (1015 psi) with new jaws and new HQ rods.	

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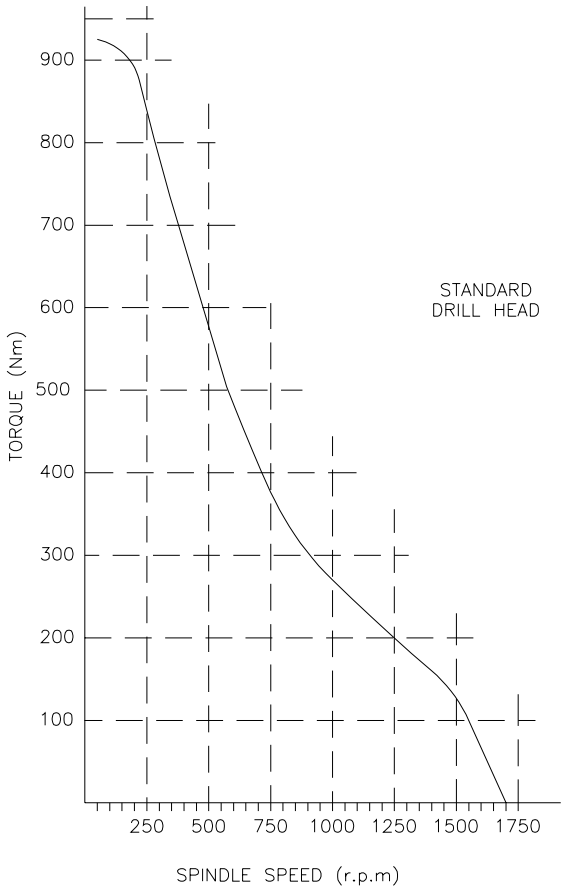
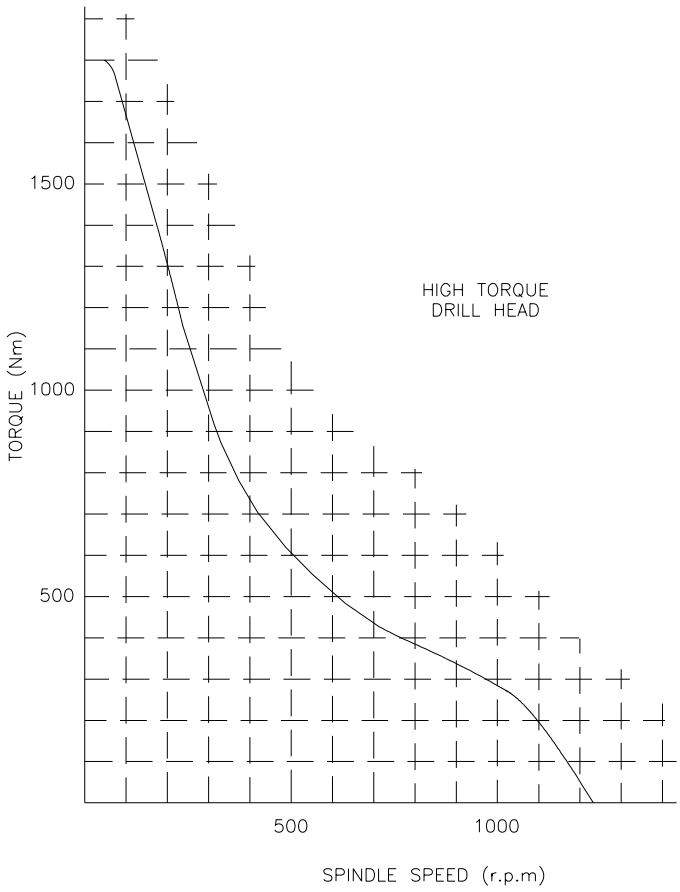
HQ DRILL HEAD	Standard		High Torque	
Chuck speed	Forward	Reverse	Forward	Reverse
	0–1650 RPM l	80 RPM n	0–1200 RPM l	80 RPM n

l Continuously adjustable. Speeds will vary with oil type and temperature, and are only approximate.
n Fixed to help prevent rod thread damage.

Chuck output torque	Forward	Reverse	Forward	Reverse
(at stall)	925 Nm (685 lb ft)	1950 Nm (1440 ft lb)	1800 Nm (1330 lb ft)	3600 Nm (2655 lb ft)

Dynamometer Produced Chuck Output Curve





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Underground Drills

BOART LONGYEAR

TECH DATA

DIAMOND CORE DRILLING

LM55 Modular Diamond Drill System

DIMENSIONS AND WEIGHTS

Chain Coupled Feed Frame

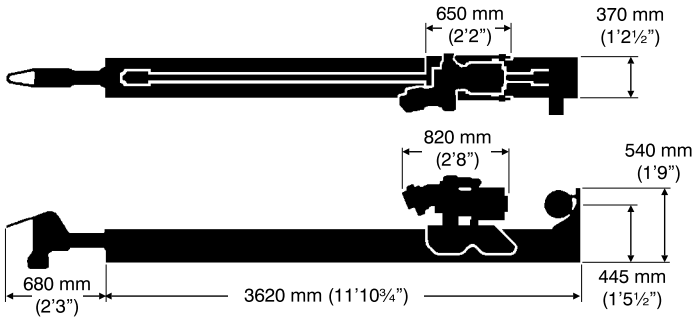
Total Weight: 750kg (1650 lb)
incl. Jaws and Bushings.
Add 20 kg (44 lb) for Rod Slide.

Rotation Unit c/w Chuck

Weight: 185 kg (407 lb)

Rod Clamp Assembly

Weight: 46 kg (101 lb)



Direct Coupled Feed Frame

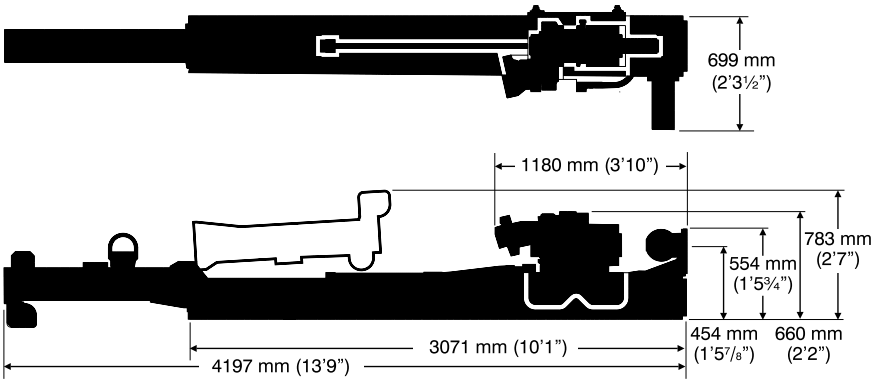
Total Weight: 840 kg (1850 lb) approx.
incl. Jaws and Bushings.

Rotation Unit c/w Chuck

Weight: 185 kg (407 lb)

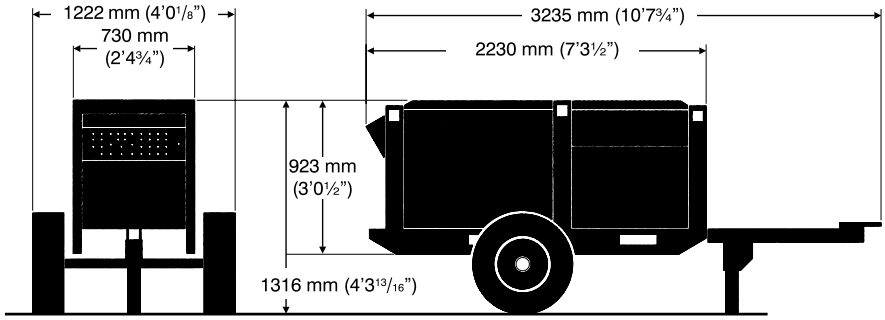
Rod Clamp Assembly

Weight: 46 kg (101 lb)



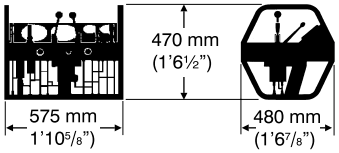
Power Pack

Weight: 1180 kg (2596 lb)
incl. electric motor and starter,
but without towing group.
Gross (Export boxing) 1220 kg (2684 lb)
Approx. shipping net volume 2.35 m^3



Control Panel

Weight: 46 kg (101 lb)
without hoses.
Add 42 kg (92 lb) for hoses.



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