

LS600 ROTA-SONIC DRILL RIG



LS600 ATV SUMMARY		
The main power source is a 167Kw, 6.6 litre, 4 stroke air-cooled diesel engine, which drives the open centre hydraulic circuit (at a max operating pressure of 275 bar).		During transport and tracking the control panel is covered by a lockable door.
The drilling and set up control panel is mounted on the right hand side of the machine rear. All of the control and monitoring instruments for the drilling functions are present on this panel.		Emergency STOP switches are fitted on all control panels. A safety tripwire is also fitted along the length of the rod rack. Activating any of these safety devices immediately stops all functions.
The controls and instruments of the fully hydraulic drill are conveniently positioned with graphic symbols used to indicate functionality and aid with user friendly operation.		A rotation barrier provides protection from, and obstructs access to, the rotating drill string in tandem with pressure switches linked to the rotation feed. This allows the drill crew to open the barrier and gain access to the drill string to perform borehole advance and sample retrieval procedures, with an in built failsafe as the rotation feed is minimised at such time as the circuit is open.
Drill rig is supported by a tracked Marooka unit. This unit contains drill rods and casing to allow full rig functionality. Independent jack levellers. Max laden weight of Marooka is 17T, dimensions in transport are 6.10m (L) x 2.75m (W) x 3.60m (H).		The highly efficient open centre (drill mode) hydraulic system utilises quality gear pumps and motors for maximum power transmission and competent life, drawing from a single reservoir of fully bio-degradable hydraulic fluid to lubricate and power the system.
The drill rig has a 24V DC electric circuit when operating in drive mode and a 12V DC circuit for drilling mode.		The hydraulically driven Boart Longyear PS150 drill head provides plenty of flexibility to perform most coring operations.
		
LS600 ATV DIMENSIONS:		LS600 ATV MAIN FEATURES:
Transport Mode:	L: 10.30m; W:2.66m; H:3.65m	Superficial & Bedrock Coring Capabilities
Drill Mode (Mast Vertical):	L: 9.60m; W:3.53m; H: 10.59m	Standard or Lined Samples
Max (laden) Weight:	20,500 kg	In-Situ Sampling (UT)
Ground Pressure:	5.9 psi / 41 KPa	412, T2-101, SWF, Lexan & Geobor Wireline Adaptability
Head Travel:	7.44m	Rotation Guarding, Trip Wire Switches & Emergency Stops
Tooling Size:	88mm to 305mm (3.5"-12")	Guarded elevated working platform
Hydraulic Fluid Capacity:	333 litres	Mast with feed cylinder extension to enable 6.00m tripping
Diesel Capacity:	160 litres	Tilt feed to allow drill string/head horizontal orientation
Depth Capacity:	150m +	Fast, optimized manual rod handling, guarding & rack

LS600 ATV TECHNICAL DETAILS

Sonic Coring Head		Prime Mover		Hydraulic System	
Vibration Motor Flow	0-110 l/min @ 0-275 bar	Standard	CAT 6.6, 4 Stroke Diesel	Max Flow	240lpm @ 2300rpm
Rotation Motor Flow	0-55 l/min @ 0-275 bar	Power Maximum	167kW@2200rpm	Max Pressure	275 bar
Lubrication Motor Flow	20 l/min @ 30-60 bar	Diesel Tank Capacity	160 litres	Hydraulic Oil Volume	333 litres
Torque at 275 bar	240 da Nm	Fuel Consumption	46.6 l/h	Gear Pump Pressure	175 bar
Speed	80 rpm / 15 rpm (ROM)	Electrical Circuit	24V		
Drill Mast & Feed System		Winches		Rod Rack	
Feed Stroke	7470mm	Max Pull on Inner Layer	9.65 kN	Dimensions L x W x H	3120 X 470 X 315 mm
Feed Speed - Down	Normal / Fast	Line Speed	56 m/min	Rod Type	3.5"
Feed Pressure Control	+/- 34 N	Cable	6mm		
Fast Feed Speed - Up	25/50m/min	Rod Clamps		Marooka Support Unit	
Fast Feed Speed - Down	42/84m/min	Max. Diameter	330 mm	Dimensions (LxWxH)	6.10m x 2.75m x 3.60m
Pull Down Force	40.5 kN	Max. Capacity	129 kN	Max (laden) Weight	
Pull Back Force	67.5 kN	Max. Breaking Torque	23 kNm	Ground Pressure	63.5kg / 750mm
Dimensions & Weights (LS600 Only)		Drill Mode Dimensions (LS600 Only)		FMC Water Pump	
Length in Transport	10.30m	Length in Drill Mode	9.60m	Model	FMCL1622BCD
Height in Transport	3.65m	Height in Drill Mode	10.590m	Flow	190 lpm
Width	2.66m	Width in Drill Mode	3.530m	Pressure	60 bar
Total (Dry) Weight Approx.	20,500kg	Crawler Chassis		Speed	580 rpm
Climbing Capacity	(Grade 60%) 30° approx	Axle Distance	1800 mm	For more information on our capabilities please visit: www.geosonicdrilling.co.uk	
Sound Level	Below 76dba at 10m	Length	3870 mm		
Welding Generator		Width of Tracks	700 mm		
Getec		Driving Speed	7.6km/hr (L) 11km/hr (H)		

