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FACT SHEET



**Drilling
Technology**

**LONGYEAR "44"
DIAMOND CORE DRILL**

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About The Longyear "44" Diamond Drill Rig

Our track mounted Longyear "44" drill rig offers efficient drilling in the high-capacity class. Powerful planetary gear hoist, oversize brakes and other components are built to exceed the requirements for its rated capacities.

High-Capacity Hydraulic System

Features a variable volume, vane-type pump which delivers exactly the amount of oil required. Overheating and foaming of oil is minimized. Minimum horsepower is required to operate pump. An efficient oil filter is provided to protect the hydraulic system.

Skid / Track Mounted Option

The Longyear "44" can be used on a skid or as a track-mounted rig ensuring long-term use under severe operating conditions.

Planetary Gear Hoist

This standard modular component provides smooth and efficient operation for all hoisting and lowering. The clutch and brake provide complete control without utilizing the main power clutch.

Built-In Wire Line Hoist

This modular unit eliminates the need for a second hoist engine and gives the operator precise control of wire line operations. Power is transmitted by roller chain from the drill transmission and may be disengaged during drilling.

Feed Control

Positive control of weight on the bit and rate of advance is accomplished by bleeding oil from the lower end of the feed cylinders through a needle type control valve. A quick-return circuit is provided for raising the drive rod to re-chuck. The directional control valve spool used to control the hydraulic head incorporates four independent valve positions: Up, Down, Neutral and Float. At shallow depths the directional control valve spool should be set in a down position where full hydraulic pump pressure can be applied above the pistons to provide bit weight. At greater depths, set the directional control valve spool in float position, and the weight of the drill string can be employed to provide bit weight, without the necessity of applying hydraulic pressure above the pistons. Advantages: Less horsepower required...cooler oil...less wear.

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Twin Hydraulic Swivel Head

Incorporates twin (4" I.D.) hydraulic cylinders widely spaced for extra stability, with a full 24" stroke. The hexagonal drive rod (3 7/8 I.D.) passes HCQ wire line rod, HW rod, and NW casing. The swivel frame is built of cast-steel for extra strength, to withstand the severe stresses imposed by drilling.

New 3-Spool, 4-way Hydraulic Valve

Simplifies installation and minimizes the cost of adding extra hydraulic accessories. There is no need for costly re-piping of the hydraulic system. When needed, accessories are simply connected to receive full hydraulic power.

4-Speed Transmission

Synchro-mesh. Four forward speeds and one reverse.

Oil Bath Lubrication System

A reliable self-lubricating system for the gear train. Points requiring manual lubrication are easily accessible.

Technical Specifications

POWER UNIT	60 Horse Power & 2200 rpm
OVERALL DIMENSIONS WIDTH LENGTH (SKID MOUNT) HEIGHT	1168 mm 2742 mm 1676 mm
CUBIC DISPLACEMENT (SKID MOUNT, BOXED FOR EXPORT)	6,25 m ³
CAPACITY	PQ 341 m HQ 511 m NQ 858 m BQ 1089 m
HOIST TYPE DRUM DIMENSION DRUM CAPACITY BARE DRUM SPEED	Planetary 330 mm diameter, 178 mm long 46 m of 15,8mm wire rope 20, 43, 78, 133 meters per minute at 2200 rpm
HYDRAULIC PUMP TYPE VOLUME MAXIMUM PRESSURE	Variable volume vane type 0-75 liters per minute 70 kg per square cm
HYDRAULIC HEAD TYPE SPINDLE I.D. HYDRAULIC CYLINDER I.D. FEED LENGTH ANGLE RANGE	Twin cylinder type 98,4 mm 101 mm 610 mm 360°



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About Geomech Africa

Geomech Africa (Pty) Ltd is an industry leader in the geotechnical investigations in Southern Africa. Certified as a **Level 1 B-BBEE** contributor. Providing drilling and testing services to the minerals exploration market, as well as geotechnical and civil industries in and around Southern Africa and Africa.

Geomechanics has long-term policies of developing operational/maintenance staff and upgrading equipment, to ensure that geotechnical investigations conducted for our clients are accurate, timely, cost effective and easily interpreted.

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The GeoGroup



GeoGroup comprises of a group of companies, each a leader in it's own field, providing a range of services to the geotechnical, civil, mining and energy industries.

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