UDR 1000 Specifications

Type
All hydraulic top head drive.

Drill Mast
9 m (30 ft) rod pull capacity. 12 m (39' 4") long. Designed for drilling angles between vertical & 45°. Incorporating a dual point mast pivot frame & 1,300 mm (4' 3") hydraulic mast dump to ground level at 45° drilling angle.

Diesel Motor
Cummins 6CTA8.3 producing 172 kW (230 hp) at 2,200 rpm to power hydraulics.

Rotation Head
D15 top head drive coupled. High / low manual gear change. 7.5:1 first stage planetary, 3:1 helical gear final drive. 3 – 1,500 rpm. Stepless speed control, 3 – 2,000 rpm in low gear and 200 – 1,500 rpm in high gear.

Output Torque 100% Efficiency

Intermittent:	14,324 Nm (10,557 ft-lbf) @ 373 rpm
Continuous:	966 Nm (712 ft-lbf) @ 1,000 rpm
	644 Nm (475 ft-lbf) @ 1,500 rpm

Fully automatic torque-speed control for diamond drilling, running the bit always at maximum possible rpm, using maximum available horsepower. 68 mm (2.68") ID hollow spindle, floating 50 mm (2") jet lubricated gears & bearings. Air-to-lube oil heat exchanger fitted.

Head Traverse
Hydraulic cylinder over ropes, 2:1 ratio. 7.32 m (24 ft) traverse, with maximum traverse speeds of 44.8 m (147 ft) per minute up & 29.6 m (97 ft) per minute down. Hydraulic head rack back.

Pull Down
70 kN (15,700 lbf)

Pull Out
112 kN (25,200 lbf)

Rod Pull
9 m (30 ft)

Main Hoist
122.7 kN (27,590 lbf) maximum pull, 120 m (394 ft) per minute maximum speed. Mast top-mounted, single-line pull. Fully automatic pull-speed control pulling the rod string always at maximum possible speed using maximum available horsepower.

Water Pump
Bean W1122BCD, 140 lpm at 7,000 kPA (37 gpm US at 1,000 psi).
Options available.

Rod Break Out
Options available. With hydraulic chain tong up to 24,200 Nm (18,000 ft-lbf) torque for 83 mm (3-1/4") to 210 mm (8-1/4") OD pipe.

Rod Clamps & Slip Table

44.5 mm (1-3/4") to 177.8 mm (7") rod clamp jaws, hydraulically operated & self-energizing. Casing & rod slips, hammer, spanners, bit breaker baskets, 320 mm (12-5/8") mast bottom opening, 224 mm (8-3/4") rod clamp opening.

Wireline Winch

1,500 m (4,920 ft) of 6 mm (1/4") wire rope. 12.6 kN (2,800 lbf) full drum pull at 430 m (1,410 ft) per minute. 21.4 kN (4,800 lbf) bare drum pull at 255 m (835 ft) per minute.

Hydraulics

Highest quality axial & radial piston pumps & motors used in three independent open circuits (Main – Water – Cylinders). Full flow 10 micron beta-rated return oil filtration. Larger-than-average hose & control valve sizes used to achieve highest possible circuit efficiency. Proven reliability over thousands of hours can be demonstrated.

Rod Carry Rack

Tray type for 6 m (20 ft) lengths of drill pipe situated on the right hand side of the drill tray. Nominal capacity 20 x 6 m (20 ft) lengths of 114 mm (4-1/2") pipe.

Rod Boom & Winch

Hydraulic, fully variable rod handling boom from all angles from vertical to 45°. Main boom swiveling to side & fitted with 3.1 kN winch.

Depth Capacity

Drilling Technique

1. High pressure down-the-hole hammer drilling & rotary non-core, mud or air flush:

Hole OD	Rod OD	Depth
165 mm	89 mm	520 m
6-12"	3-1/2"	1,700 ft

2. Diamond core:

	N+	H+
m	1,500	1,000
ft	(5,000)	(3,300)

NOTE: Diamond drill depth capacities based on straight, vertical, clean fluid-filled holes. No allowance made to break core. + refers to "O", "Q", "T" or similar wireline systems.

Approximate Weight & Dimensions

Bare drill on hydraulic jack-up tray

Weight: 15,000 kg (33,000 lb)

Length: 12 m (39' 4")

Width: 2.5 m (8' 2")

Height: 3.6 m (11' 10")