



**UNDERGROUND
DRILLING RIGS**

UDP
Series
UDP 600



Underground Drilling Rigs

- **Safe and fast rod handling.** Automatic synchronisation between chuck and rod holder.
- **A rotation unit with optimal torque and speed.** Easy to adapt for different diameters and geological conditions.
- **Simple and reliable chuck.** Very few moving parts, widely adjustable gripping force, easy to service. 89 mm (H-size) core barrels pass through the chuck spindle and the rod holder.
- **Direct acting telescopic feed cylinder.** For quick rod handling at all depths.
- **Drill in any direction**

Standard equipment includes a manually operated turntable and worm gear. For easy positioning an optional hydraulic powered worm gear is available.

- **Electric powered crawler.** Electric powered for drilling operations, but can optionally be equipped with a diesel tramming kit
- **Simple, robust power unit with a double hydraulic pump.** Double pump permits independent regulation of feed and rotation. Equipped with a power take-off for driving a flush pump. Easy access for maintenance.
- **Pressure Filtration** protects the hydraulic circuit and control console from contamination that can enter the circuit when hydraulic hoses are disconnected for moving the drill. Pressure filters and main valves are mounted on the drill unit.
- **Water Flow Meters and RPM gauges** (optional equipment) provide additional information for the driller.

Drill Rod Size	Approx. Drilling Depth
B wireline	1000 m
N wireline	600 m
H wireline	300 m

"The above capacity values only serve as a guideline, and refer to vertical, downward drilling in homogeneous rock".

Rotation Unit

Consists of a hydraulic motor, a gear box, a hollow spindle and a hydraulic chuck. Rotation is transmitted via the gear box to the chuck that, by hydraulic pressure, grips and rotates the drill rod. The chuck and the rod holder are synchronized by an integral sequential logic system for safe and easy rod handling. The rotation unit has an hydraulic system for off-hole clearance. Rotation speed and axial holding force of the chuck are adjustable from the control panel.

The chuck grips the rod by hydraulic pressure which is adjustable. The chuck jaws are quick change type. Both steel jaws and jaws with Tungsten Carbide inserts are available.

UDP Series / Technical Specifications

Rotation Characteristics - High Torque

Speed Range: 0-1400 rev/min
Maximal Torque: 1850 Nm
Spindle Inner: Ø 101 mm
Chuck Axial Holding Force: 150 kN



Feed Frame

The Feed movement is achieved by a telescopic hydraulic cylinder.

Feed Force: 89 kN
Pull Force: 89 kN
Rod Running Speed: 0.9 m/sec
Feed Length: 1800 mm

Rod Holder

The rod holder is hydraulically opened, and closed by gas pressure. In case of loss of hydraulic pressure, the rod holder closes instantly. The gas pressure can be conveniently monitored.

Max. Rod Size: 89 mm
Bore (without jaws): 102 mm
Bore (without covers): 170 mm
Axial Holding Force: 45 kN
Axial Holding Force (TC insert jaws): 90 kN

Wireline Hoist Meets All Drilling Needs

UDP 600 m drum capacity of 5 mm wire diameter mounted underneath the feed frame.

Pull Force

- Minimum (full drum) 3 600 N
- Maximum (empty drum) ... 9 700 N

Hoisting Speed

- Minimum 1.8 m/min
- Maximum 4.8 m/min

Flush pump

UDP flush pumps are designed for both mud and water flushing. The distribution block is prepared for mounting of accumulator, adjustable steady flow valve and other optional equipment.

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Flow 140 l/min
Pressure 70 bar
Weight 210 kg



