



DYNATECH

DYNATECH INDUSTRIES PVT LTD

UCD – SERIES

Heavy Duty Diamond core Drill

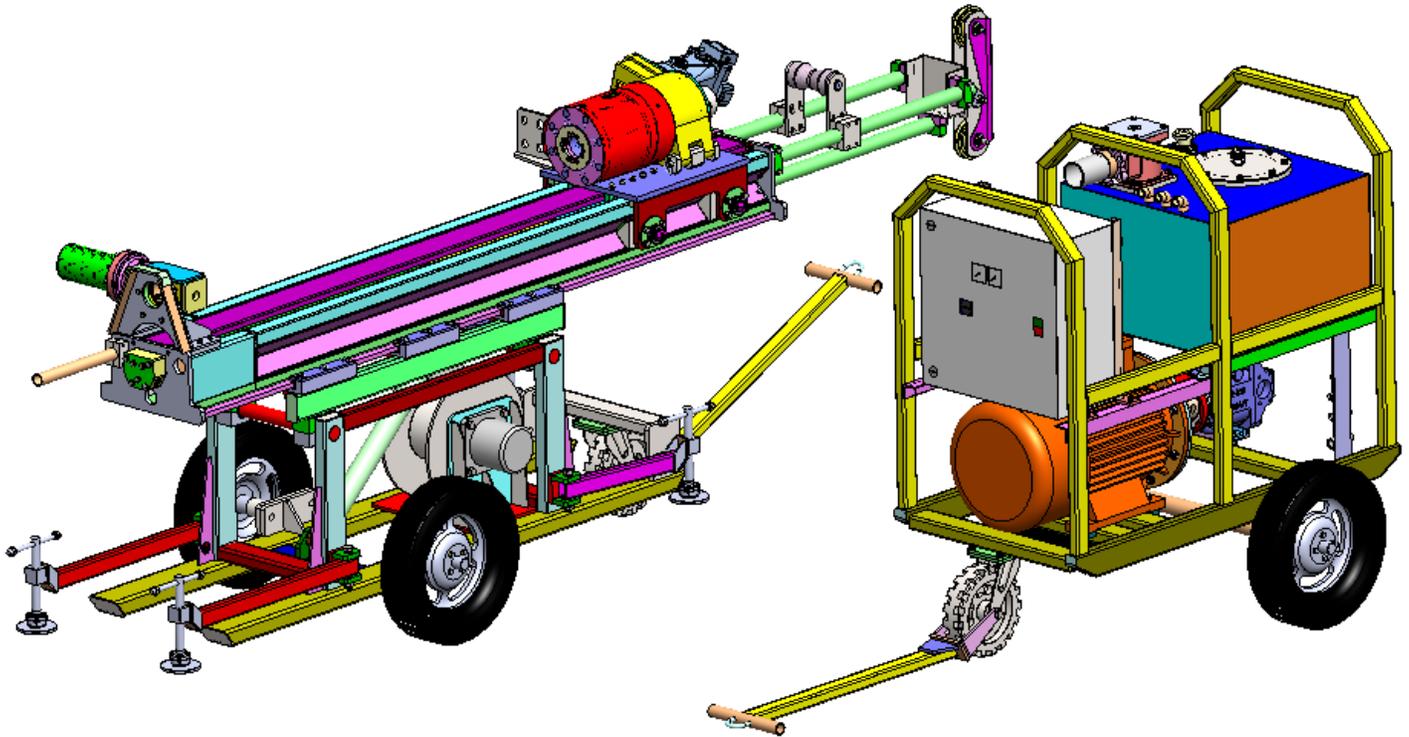
MODEL – UCD20

TECHNICAL SPECIFICATIONS

Dynatech Industries Pvt Ltd

Under ground Core Drill - UCD- 20

Technical Specifications



Product Introduction

Dynatech Industries Core Drill- **UCD20** is a versatile SKID Version heavy duty underground Hydraulic Diamond core drill in compact frame size for underground mineral exploration Applications where the sites are located at remote places & hard to access.

Features

- Deep hole underground electric hydraulic drill.
- Depth rated to 350m (1148ft) A+ Rod.
- Outstanding for wire line drilling to A+ Size
- Unique feed Cylinder with chain or cable feed
- Three-module design allows quick set-up in confined areas
- High efficiency long stroke
- Variable speed gear box and motor provides widest range of torques and speeds in its class
- Integral skid with hydraulic feed frame raise and dump feature provides 360° drilling capability
- Incorporates the stranded DYNATECH drill components for reliability and easy servicing
- rod clamp and chuck pass B+ Reaming shell and diamond bit

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Drilling Depth Capacity

Method of drilling Diamond core (Wire line-Conventional)

A+ - 350 Meters (1148ft)
B+ - 220 Meters (721ft)

Note: The above drilling Depth can be reasonably expected based on Straight, Vertical, Clean fluids fill holes .The depth capacities mentioned above are guide lines by field operators.

Actual drilling capacity depends on conditions, drilling techniques, In-the whole tools and used. DYNATECH cannot stand guarantee for these results in all drilling conditions.

+ Refers to "O", "Q", "T" or similar wireline rod systems

FEED BOOM & HEAD TRAVERSE SYSTEM

Feed boom is made of stiff and torsion steel profile construction . Feed boom is mounted on a frame with two hydraulic tilt cylinders and mechanical lockable supports. The positioner is specially designed for easy setup when fan drilling and has full range adjustment from vertical down to vertical up.

The feed cylinder is situated between the drill slide members. It is of unique design which allows 1.7m of head travel without the use of chains or wire ropes and equal force on both sides.

The design has the advantage of doing away with chains and sprockets or wire ropes and pulleys, resulting in higher efficiency and less maintenance .

Type	Hydraulic cylinder Direct coupled.	
Head travel length	1, 7 m	(5.75 ft)
Rod hosting length	1, 50 m	(4.93 ft)
Retract force	30 KN	(6744 lb)
Pull down force	30 KN	(6744 lb)
Pull up speed	15 meters/min	
Pull down speed	15meters/min	
Fine feed speed	2.5metres/min	

Dump

Stroke	500 MM skid version
Mechanism	Hydraulic cylinder with locking valves.
Mast raising	two independent hydraulic cylinders with lock Valves.

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Rotation Unit

The Rotation unit is powered by a Hydraulic motor , a sealed gear box with hollow spindle and “B”Chuck .The “B”chuck jaws are quick replaceable . the rotation speed is adjustable from the control console . Chuck and rod holder are synchronized for faster and safer operation.

TORQUE AND SPEED RATINGS

Hydraulic motor at minimum/maximum, Motor at 1440 rpm.

Max Rotation speed : 1700rpm
Max torque : 98Nm@1700rpm/350@450Rpm
Inner spindle diameter : 62mm
Size and jaws : A , B , size 5nos.

Note: Rotary Head torques and speeds are infinitely variable in each gear range as indicated
Output Speeds & torques are on 100% efficiency, Actual rotation speed is effected by
Engine Rpm and motor displacement settings

Powerpack

The power pack consists of a rugged skid frame on which is mounted the 30kw(40hp) electric motor, double pump drive and three hydraulic pumps. The main pump power rotation . fast travel and wireline hoist. the second pump powers slow feed and the manual release of chuck and clamp release. The third pump powers water pump.

The large 150L reservoir provides flooded suction for all pumps. Lockable full bore valves in the suction lines permit easy servicing. Hydraulic oil can only be added to the tank through a hand pump and filter preventing contamination of the hydraulic system. An external sight gauge allows easy monitoring hydraulic oil level and temperature

A full flow 10 micron beta rated return filter with virtual indicator keeps the hydraulic oil clean a water cooled heat exchanger cools the hydraulic oil.

Electric Motor : 30kW (40hp)
Protection : IP55 , (Flame proof Optional)
Hydraulic Tank Capacity : 150 L (50 gal US)
Max Operating pressure : 280bar (4060 Psi)
Hydraulic oil Cooling : Water Cooling by Heat exchanger

CONTROL CONSOLE

The control console is the valves which controls direction and speed (continuously variable) of rotation, fast travel and handling .

gauges are provided for rotation pressure, bit weight, and drilling water pressure. Water pimp flow is continuously variable from the console.

All hydraulic hose connections to the power pack, drill head and feed frame are through quick disconnect coupling for convenience in moving and setting up.

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Wire Line Winch

Hoisting Capacity	4 KN (899 lb) (Bare drum)
Line speed	102 m/min (335ft/min) (Bare drum)
Line sped	256 m/min (840 ft/min) (Full drum)
Cable diameter	5mm
Cable Capacity	350* meters (1148*ft)
Drive motor	fixed displacement
Level winder	Optional (mechanical drive through winch shaft)

Note: Wire cable not supplied with rig to be ordered separately.

ROD CLAMP

The hydraulic clamp assembly is fitted with nine jaws held in the gripped position by springs and released by hydraulic pressure. In the event of hydraulic System failure the clamp is fail safe.

The clamp is hinged in similar manner to the drill head to facilitate the introduction of large diameter casing when space ahead of the drill is limited. Both chuck and clamp use interchangeable carbide set jaws retract sufficiently to pass bit and reaming shells up to N+ size

Capacity	B+
Make	DynatechIndustries
Jaw Sizes	A+/ B+
Mode of operation	Hydraulic Release ,Spring Closed

Options

Wire ropes

Wire line	5mm X 350 meters long
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Wire line

spooler Device

Electricals

Flame proof Motor & Control Devices.

Water Pump

Type	Triplex Piston Pump
Power	Hydraulic operated
Max flow	70 LPM
Max pressure	6.895 MPa (1000 PSI)

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Approximate Weight/Dimensions.

Bare Drill Rig SKID VERSION with power pack and control panel frame.

Weight 1750Kgs (Bare rig)

Specifications are subjected to modify or change ,Which are made time to time by DynatechIndustries Pvt Ltd and their suppliers according to their polices for upgrade their products. All Dimensions and weights are approximate and are subjected to change without notice.



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