



**DYNATECH**

**DYNATECH INDUSTRIES PVT LTD**

**CD – SERIES**

**Heavy Duty Diamond core Drill**

**MODEL – CD180**

**TECHNICAL SPECIFICATIONS**

# Dynatech Industries Pvt Ltd

Core Drill - CD-180

Technical Specifications

## Product Introduction

**Dynatech Industries Core Drill- CD180** is a versatile heavy duty Hydraulic Diamond core drill in compact frame size for surface mineral exploration Applications where the sites are located at remote places & hard to access. The drills are built with long experience and knowledge which

## Features

The making itself propelled to access the difficult sites OR it can be Truck Drills are fitted on crawler tracks powered from rig hydraulics Mounted for greater maneuverability and easy to relocate between sites.

Drills are built with well market proven components which providing more Durability, easy to service, user friendly, improved power factor with Highly efficient hydraulics.

Slide/Dump mast lowers the working height dramatically which helps to Have more stable working platform

Long stroke mast with powerful feed system with fine control option Improves bit life and production rated at higher depth of drilling. Drills open design makes easy accessibility to Daily checks and for minor And major maintenance works.

## Drilling Depth Capacity

Method of drilling Diamond core (Wire line-Conventional)

**B-Size** - 2150 Meters (7052ft)  
**N-Size** - 1800 Meters (5904ft)  
**H-Size** - 1200 Meters (3936ft)  
**P-Size** - 750 Meters (2460ft)

**Note:** Diamond core drilling Depth are based on Straight, Vertical, Clean fluids fill holes. The depth capacities mentioned above are calculated by field experience. Actual drilling capacity depends on conditions, drilling techniques, In-the whole tools and equipment used.

## Prime Mover

<b>Engine</b>	Cummins.
<b>Model</b>	6CTA8.3A
<b>Power</b>	194 Kw / 260 HP
<b>Speed</b>	2100Rpm
<b>Engine type</b>	Diesel Turbo charged
<b>Cooling</b>	water
<b>Emission Norms</b>	Non Certified
<b>Enclosure</b>	Fully covered steel enclosure with Lockable Door

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## Mast & HEAD TRAVERSE SYSTEM

Box type construction fully welded RHS lattice with cross Bracing  
Designed for drilling angles between vertical to 45 Degree  
Mast is fitted with safety guards and adjustable roller for rod handling,  
Tie rod supports in angle degree drilling.

Type	Hydraulic cylinder Direct coupled.
Head travel length	3,5 m (11'.3" ft)
Mast length	9, 5 m (app), (31.2ft)
Rod hosting length	6, 09 m (20 ft)
Retract force	181.5 KN (40802lb)
Pull down force	61.5 KN (13825 lb)
Pull up speed	25 meters/min
Pull down speed	25meters/min
Fine feed speed	4.5metres/min

## Dump

Stroke	1100 MM (43.3")
Mechanism	Hydraulic cylinder with locking valves.
Drilling Angle	90 degrees vertical down to 45 degrees Horizontal
Mast raising	two independent hydraulic cylinders with lock Valves.

## ROTATION HEAD

Model	Top Drive
Gear Change	Two speed High/low gear manual change
Drive Motor	Hydraulic -Variable displacement
Spindle bore	119mm
Lubrication	Forced lubrication
Mounting	Hydraulic Slide – Sideways
Features	
Cooler- lubrication	Air to oil
Speed control	Steeple's speed control can be very precise Improves bit life time .Speed and torque Controlled. By operator from control panel.

## TORQUE AND SPEED RATINGS

Hydraulic motor at minimum/maximum, engine at 1800 rpm.

Gear	Speed	Torque	
	Rpm	Nm	(lbft)
Low Speed Gear	130 - 343	6563- 2485	(4840 - 1832)
High Speed Gear	456 - 1200	1875 – 710	(1382 - 885)

**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

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## Main Winch

Hoisting Capacity	135 KN (30350 lb) (Bare drum)
Hoisting speed	40 m/min (131 ft/min)/ 80 m/min (262 ft/min)
Cable diameter	22mm (0.87" inch)
Cable length	35meters (145 ft)
Drive motor	fixed displacement
Static / Dynamic Braking	Spring applied hydraulic release / Over center valve
Mounting	Deck
Rope winding	spring forced nylon roller

**Note:** Do not use multiple part lines with the main winch. Use only single line.  
Wire cable not supplied with rig to be ordered separately.

## Wire Line Winch

Hoisting Capacity	18 KN (4046 lb) (Bare drum)
Line speed	140 meters/min (460 ft/min) (Bare drum)
Line speed	465 meters/min (1525 ft/min) (Full drum)
Cable diameter	6mm
Cable length	1850 meters (6068 ft)
Drive motor	fixed displacement
Braking	Over center valve
Mounting	Deck
Level winder	Standard (mechanical drive through winch shaft)

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

## ROD CLAMP

Capacity	P
Make	DynatechIndustries
Jaw Sizes	P / H / N / B
Mode of operation	Hydraulic

## Hydraulics

Main pump

Type	Variable displacement
Controller	Load sensing
Working pressure	280 Bar
Make	SauerDanfoss

Auxiliary pump (water)

Type	Variable displacement
Controller	Load sensing
Working pressure	280 Bar
Make	SauerDanfoss

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Auxiliary pump (auto feed & Cooler)

Type	Variable displacement
Working pressure	210 Bar

## Hydraulic Valve Group

Mail control valve

SauerDanfoss / Equivalent  
Rotation, Main Winch, Wire line Winch, Feed.

Auxiliary valves

Walvoil / Equivalent  
Auxiliaries, Auto feed, Water Pump

Water Pump

Walvoil / Equivalent  
Corse control/Fine control

Hydraulic Filters

Return Line filter, lubrication oil filter for Rotation head.  
10 Micron absolute. Mechanical Clogging Indicator.  
Hydraulic oil fills up filter & hand pump.  
Air breather assembly fitted on tank.

MICRO FEED

Separate control valves for Hold Back and Thrust.  
Separate valve for regulating Travel Speed of rotary head while drilling.

## Control panel

Gauges	Hold back, pull down, main pressure, water pressure,
Indicator	Lube oil indication mounted on rotary head.
Engine speed	lockable control handle for controlling engine RPM.
Stop	Emergency engine stop
Rotation control	manually adjustable control for rotation Speed. Control knob for torque control of Rotation Head.
Load Indication	Load gauges are mounted for hold back, pull down.
Water pump	Fine control valve has been provided on the panel
Pilot controls	Hydraulic operated Joysticks For Rotation/Feed/Main Winch/Wire line Winch.

## Hydraulic/Gear oil cooler

Type	Air to Oil
Heat Rejection	40KW
Drive	Hydraulic
Construction	Aluminum

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## JACK LEGS

Style	Bolted to base frame
Qty	4Nos
Lifting Capacity	186 KN (41890 lb) Each

## Rig Lighting

Tower mounted flood lights 2nos  
Control panel 1no

## Mud Gauge

F - Type Mud Gauge, Rotary dial with steady pointer.

## Safety

House guard	High density plastic Spiral Guard for sliding Hoses.
Emergency	Emergency stop fitted on two different locations to Switch of the engine.

## Fuel Filter

High capacity Water separator cum fuel Filter fitted in engine fuel system.	
Make	Racor

## Driver Cab

Mounted in front of the Rig with control valves for trimming.

## Approximate Weight/Dimensions.

Bare Drill Rig without Carrier rested on Jack frame.	
Weight	11000Kgs
Length	10000mm - long Mast In horizontal when rested And Straight.
Width	2400mm.
Height	2600mm. Without Carrier rested on Jack frame

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## Options

### Auto Chuck

Chuck	Spring Closed Hydraulic open.
Rod Size	PQ, HQ, NQ, BQ.
Thrust Holding Capacity	19000Kgs

### Speed indicator- RH

Rotation Gear box RPM Indicator	
Location	located on control panel
Type	Digital LCD Display, with life time battery

### Wire ropes

Main winch	22mm X 35meters long
Wire line	6mm X 1800 meters long

### Safety

Extinguisher	Dry type Fire Extinguisher fitted on the machine For easy handling.
FOPS	Falling Objects Protective Structure
Spin guard -RH Speed	Controlles the speed of Rotation Gear box as The spin guard is opened.

### Water Pump

Type	Triplex Piston Pump
Power	Hydraulic operated
Max flow	140 LPM
Max pressure	6.895 MPa (1000 PSI)

### Engine

Emission Norms	Tier III certified
Power	220HP(159KW)@2200Rpm

### Lighting & Horn

Beacon Flash Light, Drive lights for CAB.  
Horn & Reverse Horn

### RH - Float

Function	hydraulically operated by separate lever
Application	Used for controlling load on rod joints while Making and breaking

### Tramming Controls

Crawler controls	Wireless Remote Control up to 20 meters Distance Foot operated Dead man switch
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### Mud Mixer

Hydraulically operated.

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## Carrier

### Truck

**6x2 or 6X4 rigid truck chassis.  
Pay load capacity of 12500Kgs.**

### Track (Crawler) assembly

<b>Grouser construction</b>	<b>Triple Grouser</b>
<b>Total length of track</b>	<b>3250</b>
<b>Total width of track</b>	<b>2350</b>
<b>Gradeability – degree</b>	<b>2</b>
<b>Travel speed-Kmph</b>	<b>2</b>

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.



**DYNATECH**

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