

# DBC ESD5

Fully hydraulic core drill



**TOTAL CORE DRILLING TECHNOLOGY**



[www.dbcmakina.com](http://www.dbcmakina.com)

## DBC Drill Rig Product Range

- Surface and underground drill rigs
- Fully hydraulic with rod handling synchronization.
- CE certified
- The most advanced robot arm and rod elevator system



# ESD Benefits to Improve your Drilling Performance

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- **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.

76 mm (N-size) core barrels pass through the chuck spindle, 102 mm core barrels through the rod holder.



- **Double feed cylinders.** For quick rod handling at all depths. Can be set for slow feed, high force (two active cylinders) or high speed, low force (one active cylinder).

- **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.

## Capacities

Drill rod size	Approx. drilling depth
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AWJ 43	900 m
BWJ 53	650 m
NWJ 70	400 m
B wireline	550 m
N wireline	400 m

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

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## Rotation unit

Consists of a hydraulic motor, a gear box, a hollow spindle and an 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 can easily be swung aside 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.



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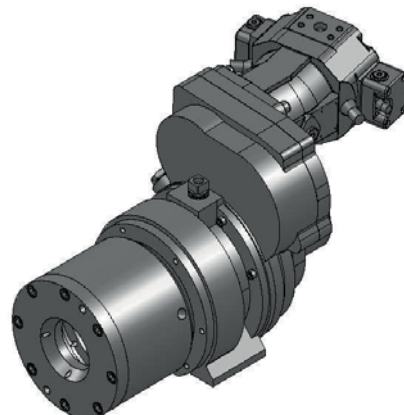
## Rotation characteristics- High torque

Speed range 0-900 rev/min

Maximal torque 1 350Nm

Spindle inner Ø 78 mm

Chuck axial holding force 100 kN



## Feed Frame

The feed movement is achieved by two hydraulic cylinders and chain system. It is possible to select between high speed/low force or slow speed/high force by activating one or both feed cylinders

Feed force 65 kN

Pull force 65 kN

Rod running speed

low speed 0.5 m/s

high speed 1.0 m/s

Feed length (mm) 1800

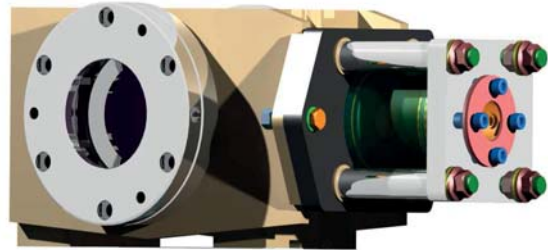


## Rod Holder

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

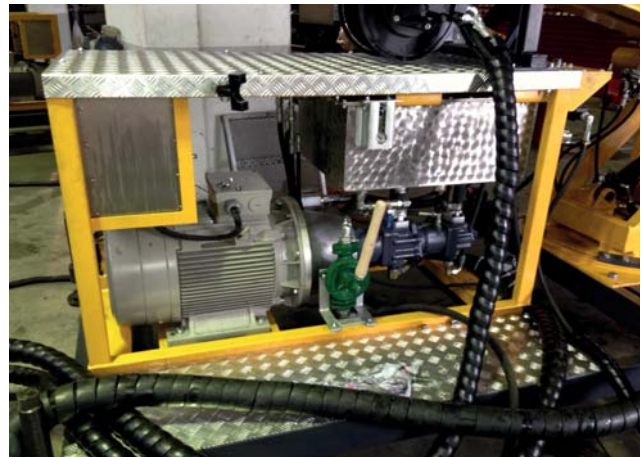


## Power unit with double hydraulic pump

The power unit has two variable-flow hydraulic pumps, mounted in tandem. They are integrated in the hydraulic system in such way as to adjust their output to the power requirements of the drill unit in a most efficient way.

Connections for an optional hydraulic driven flush pump are standard. Supplied complete with 70 litre oil tank, oil cooler and filters.

The power unit is powered by an asynchronous electric motor.



**Motor rating** 45 kW at 1450 rpm

**Main pump**

flow 75 l/min

pressure 260 bar

**Service pump**

flow 50 l/min

pressure 210 bar

## Wireline hoist meets all drilling needs

**WL-425 m** drum capacity of 5 mm wire diameter mounted underneath the feed frame.

pull force

-minimum (full drum) . . . . 3 400 N

-maximum (empty drum) . 5 800 N

hoisting speed

-minimum . . . . . 3.0 m/min

-maximum . . . . . 5.0 m/min



## Flush pump

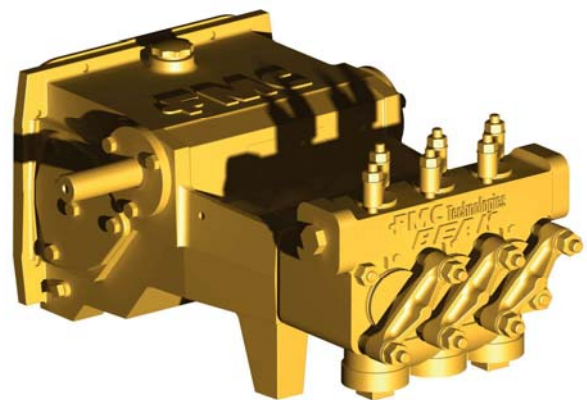
DBC flush pumps are designed for both mud and water flushing. The distribution block is prepared for mounting of accumulator, adjustable steady flow valve and other optional equipment.

DBC 140H

Flow 140 l/min

Pressure 70 bar

Weight 210 kg



## All you need for core drilling

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- \* FASTDRILL drill bits
  - \* Heat treated wireline rods
  - \* Friction welded rods
  - \* Wireline core barrels
  - \* Adapters, fishing tools
  - \* Plastic core boxes
  - \* Full grip wrenches

**"total core**  
drilling technology"



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