

DBC
S21

Fully Hydraulic Core Drill



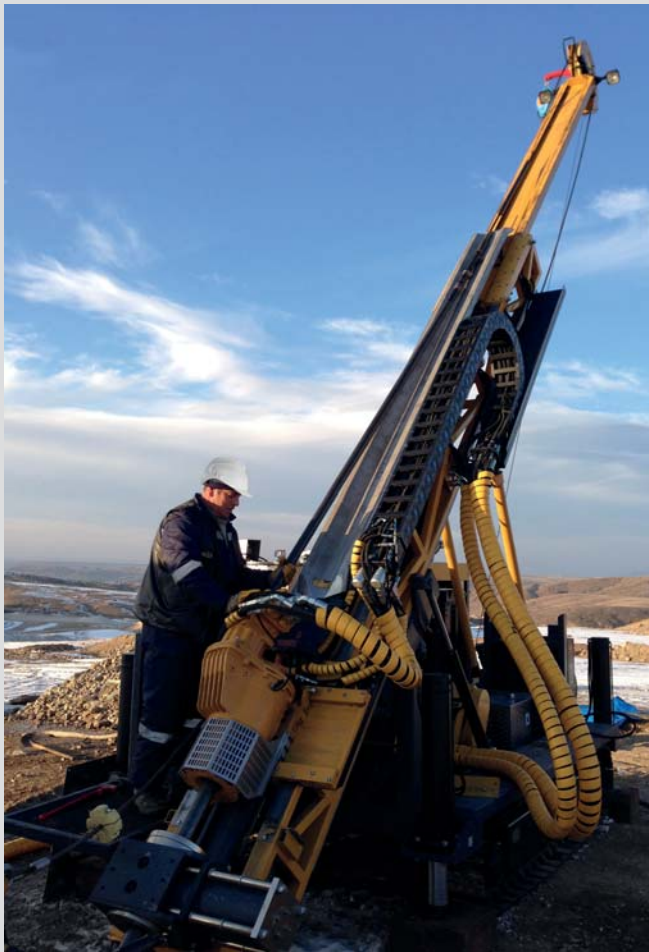
TOTAL CORE DRILLING TECHNOLOGY



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



S 21 Benefits to Improve your Drilling Performance

- Safe and fast rod handling. Patented rod elevator provides very efficient and safe operation.

- 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.



- Direct acting feed cylinder. For quick rod handling at all depths.

- Crawler carriage. Powered from the same diesel engine with drilling operations.

- Simple, robust power unit with a triple hydraulic pump. Triple pump permits independent regulation of feed and rotation. Equipped with a power take-off for driving a flush pump. Easy access for maintenance.

- Efficient filtration protects the hydraulic circuit and control console from contamination that can enter the circuit when hydraulic hoses are disconnected. Return filters are mounted on the power unit

- Water Flow Meters and RPM gauges (optional equipment) provide additional information for the driller.

- DDP– Digital Drilling Package. Including digital levelling gauge, boom angle display, penetration rate display (cm/min), ultrasonic flush water flow meter, fuel level in tank, all parameters for engine operation



Capacities

Drill rod size	Approx. drilling depth
B wireline	2750 m
N wireline	2400 m
H wireline	1550 m
P wireline	1050 m

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

Rotation unit

Rotation unit and spindle speeds

Power: hydraulic motor – variable speed/
reversible

Final drive: 6 in chain driven in oil bath – 2:1
ratio

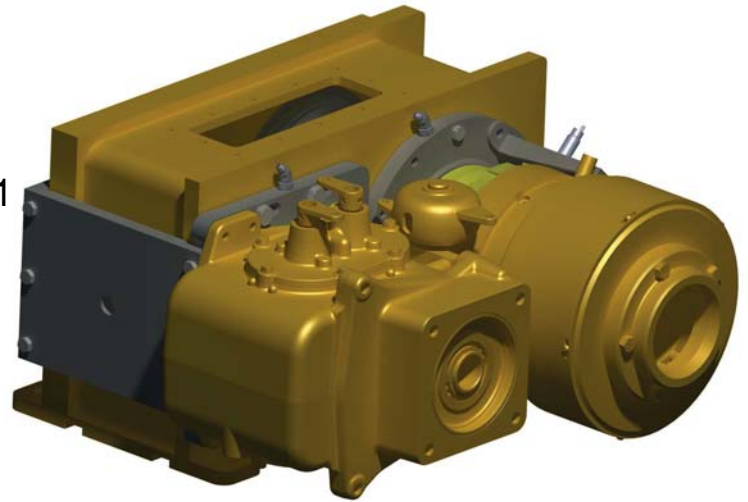
Spindle (inner diameter): 119 mm

Spindle speeds:

Speed,	Max. rpm	Max. torque, Nm
1st	200	6250
2nd	420	3100
3rd	750	1750
4th	1300	1000

Range selection: manual control from operator’s station

Hydraulic off- hole shift



The critical part of S 21 is the strong rotation unit operating with very low noise level. A special bearing system prevents the entering of the cuttings into the rotation unit and separate cover makes the servicing an easy job.

Chuck assembly

Type: hydraulic open, spring closed

Maximum inside diameter: 119 mm

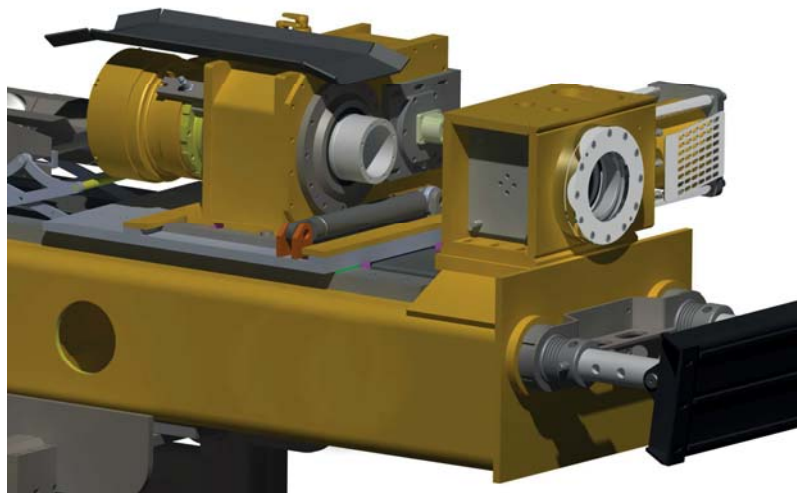
Holding capacity: 18 000 kg

Rod Holder

Type: hydraulic open, gas spring
closed

Maximum inside diameter: 140 mm

Holding capacity: 20 000 kg



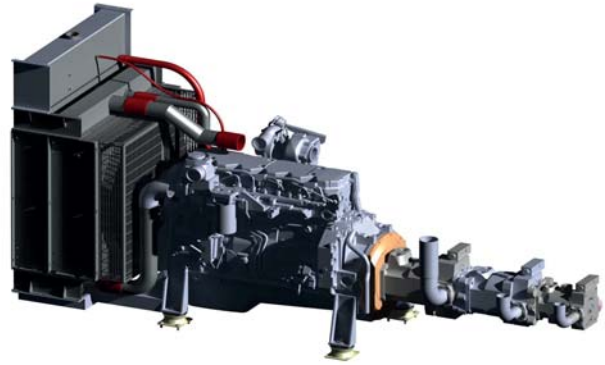
Mast and feed system

Telescopic mast
Feed travel: 3,5 m
Feed speeds: fast and slow with variable control
Feed force: 100 kN
Retract force : 200 kN
Drilling angle: 40 to 90 degrees
Rod pull length: 6,10 m



Power unit

Manufacture: Cummins
Model: QSL 9 Tier III
Volume: 8,9 liter 6 cyl.
Power: 225 kW (305 hp)
RPM: 2100
Engine type: Diesel turbocharged/after cooled
Cooling: Water



Hydraulic system

Main pump: 310 bar – 300 l/min
Service pump: 250 bar – 150 l/min
Auxiliary pump: 220 bar – 60 l/min
Hydraulic oil cooling: Air



Main hoist

Single line capacity: Bare drum 180 kN
Line speed: Bare drum 30-70 m/min
Cable size: 33 m x 24 mm

Wireline Hoist

Capacity: 2600 m of 6 mm
Line pull: bare drum: 19 kN
full drum: 5,0 kN
Line speed: bare drum 80 m/min
full drum 320 m/min
Optional: self levelling system



Drill base supports

Support: 4 hydraulic jacks
Pad diameter: 200 / 230 mm
Travel length: 550 mm

Weight

S 21 with crawler : 16 000 kg

Dimensions (L – W – H)

Transport on drill site (top mast not extended):
6370 mm -2600 mm- 2340 mm



Flush pump

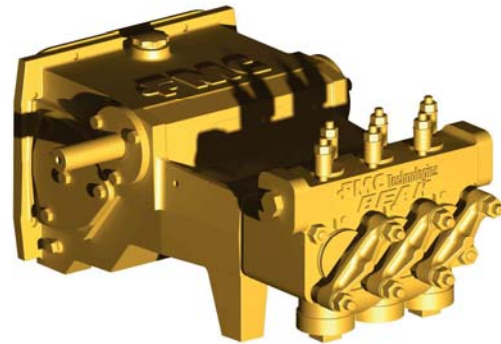
DBC flush pumps are designed for both mud and water flushing. The distribution block is prepared for mounting of accumulator, adjustable steady flow valve and other optional equipment.

DBC 140H

Flow 140 l/min

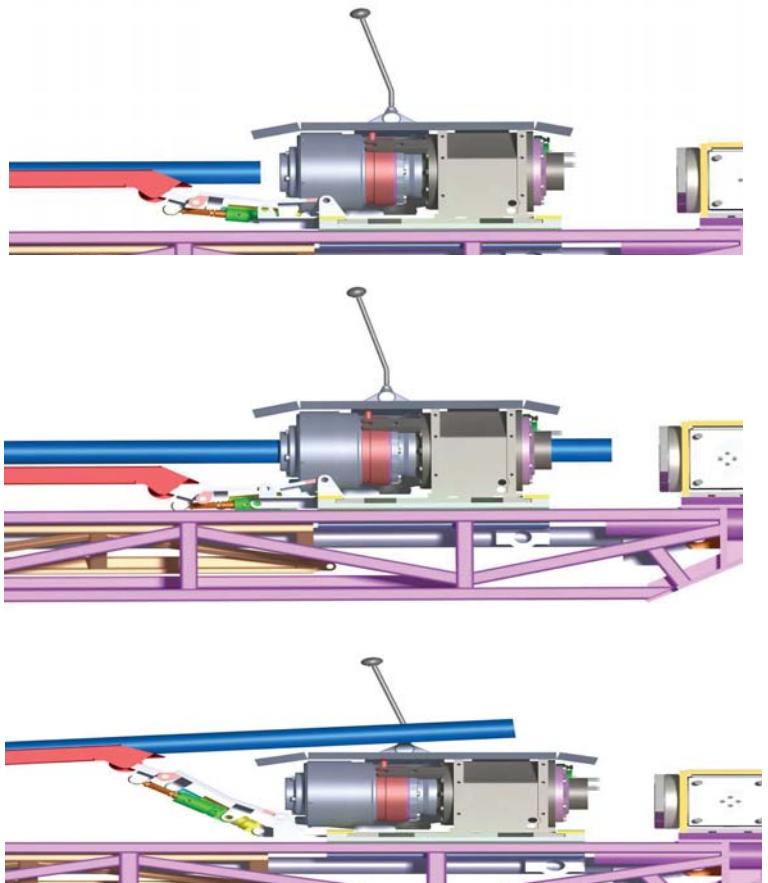
Pressure 70 bar

Weight 210 kg



Patented rod elevator

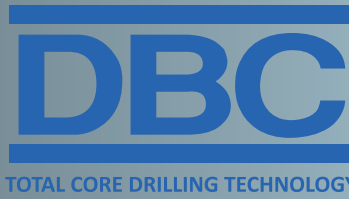
The rod elevator has 3 positions; drilling, rod adding and rod lifting and eliminates the need of an additional helper in the mast



All you need for core drilling

- 
- * 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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