

Hütte Model HBR 203 Hydraulic Crawler Drill Configured for Single Rotary & Diesel Operation s/n H203UQ0134, AC Unit: Pending, AC Item: Pending

General Description:

- ◆ The Hütte HBR 203 is a self-contained, fully hydraulic crawler drill rig, CE-conform and especially designed for difficult drilling conditions which require particularly compact and mobile equipment. It features a compact and robust design, simple and save controls and enormous gradeability as well as high efficiency.
- ◆ Furthermore the unit provides a modern and operator-friendly “load-sensing” hydraulic system. The variable displacement pumps are pilot controlled and permit a stepless adjustment of the oil flow depending on the required flow rate of the drilling function. All movements of the drilling unit are softly controllable.
- ◆ An optimal operating temperature is guaranteed and regulated by hydraulic pump P2 with a singular purpose of circulating 97 lpm through the oil heat exchanger. A thermostat then ensures a perfect operation even under severe conditions.
- ◆ The stepless adjustable tramming speed provides a versatile and mobile machine movement.
- ◆ The Hütte HBR 203 can be configured with various rotary head arrangements including hydraulic drifters or single rotary.
- ◆ These advantages are complemented by a wide performance spectrum of the Hütte HBR 203:
 - › Anchor drilling
 - › Ramming
 - › Overburden drilling
 - › Rock drilling
 - › Down-the-hole-drilling
 - › Rotary drilling
 - › Auger drilling
 - › Coring
 - › Injection drilling
 - › Micro piling
 - › Exploration drilling
 - › Geothermal applications
- ◆ The crawler drill rig type Hütte HBR 203 is composed of:

Basic Machine:

- ◆ Electric system: 24 Volt, 110 Ah
- ◆ Fully radio remote control for drilling and setup including:
 - › Rotation (HG28 or drifter) including both working and makeup speeds
 - › Rotation 3-speed selector plus variable speed dial
 - › Percussion with percussion 3 position stroke control
 - › Feed plus variable speed dial
 - › Fast feed override toggle
 - › Clamping
 - › Tracking
 - › Winch
 - › Air on / off
 - › All setup functions
 - › Emergency shut-off
 - › Rotation pressure and feed pressure digital output
- ◆ Hydraulic controls on drill rig including:
 - › Feed force control (w/ pressure gauge)
 - › Hammer pressure (w/ pressure gauge)
- ◆ Pressure maintenance valve and control instruments.
- ◆ Kinematics for set-up and alignment of the drill mast including 5 hydraulic cylinders with safety check valves.

- ◆ The boom is equipped with a repositioning turntable which permits to reach various drilling positions with $4 \times 90^\circ (\pm 45^\circ)$.
- ◆ Tow hook
- ◆ Four hydraulic stabilizers
- ◆ Hydraulic connections on base frame with quick couplings
- ◆ One set of hydraulic hoses, length: 25 m

Crawlers:

- ◆ Retractable crawler tracks mounted on base frame.
 - Overall track width: 740 mm (retracted), 1200 mm (extended)
 - Total length: 2000 mm
 - Ground clearance: 300 mm
 - Trimming speed: 2.0 km/h
 - Lower rollers: 4 pcs.
 - Track shoe width: 220 mm

Hydraulic Power Pack – Hütte HBR20 Diesel

- ◆ Mounted on rubber tired one-axle chassis including sound-proof cover with wide dimensioned slewing doors which permit an easy access for maintenance and control purposes.
- ◆ Cummins QSB 4.5 - TAA turbocharged aftercooled diesel engine
 - rated power: 97 kW (130 HP) @ 2200 rpm
 - specific fuel consumption: 245 g/kWh
 - fuel tank capacity: 190 liters

Hydraulic System

- ◆ Load-Sensing hydraulic system
 - 1 variable displacement piston pump with $Q = 206$ l/min for travelling, rotation / percussion and all cylinder functions.
 - 1 gear pump $Q = 97$ l/min for “cooler” and “pilot control”.
 - System pressure $p = 250$ bar.
- ◆ Hydraulic oil reservoir capacity: 350 litres.
- ◆ Oil-air-cooling system, hydraulically powered with automatic variable fan speed.

Drill Mast:

- ◆ Telescopic drill mast type Hütte DM 180 with feed cylinder
 - Total length: 2300 to 3550 mm
 - Feed length: 1250 to 2590 mm
 - Feed force: 38 kN (8,540 lbs)
 - Retraction force: 62 kN (13,940 lbs)
 - Feed/Retraction rate: 16/10 m/min
 - Fast feed/fast retraction rate: 41/25 m/min
- ◆ Low maintenance glide slide with central chain for reception of below Hydraulic Rotary Head type Hütte HG28, with lateral movement

Rotary Head(s):

- ◆ Rotary Head type HG28
 - Revolutions: $n_{max.} = 60$ rpm
 - Torque: $M_{max.} 27,420$ Nm (20,224 ft-lbs)
 - Working pressure: $p = 275$ bar
 - Flow rate: $Q = 170$ l/min
 - 3 stages electro-hydraulically reversible
- ◆ 2” rear flushing swivel

Clamps:

- ◆ Hydraulic clamping system including single blocking and single breaking unit for drilling dia $\varnothing 68$ mm to 324 mm, mounted on support consisting of:
- ◆ Hydraulic clamping device type Hütte C3-2 (bottom):
 - Clamping force: $F = 196$ kN at $p = 250$ bar
 - With self aligning jaws and centering device.
 - One set of centering device inserts

- ◆ Hydraulic clamping and breaking device type Hütte CB3-2 (top):
 - › Clamping force: $F = 196 \text{ kN}$ at $p = 250 \text{ bar}$
 - › Breaking torque: $M = 25,5 \text{ kNm}$ at $p = 250 \text{ bar}$
 - › With self-aligning jaws
- ◆ Centering device

Service Winch:

- ◆ Hydraulic service winch mounted on drill mast with cathead.
 - › line pull: 13.5 kN
 - › rope length: 30 m
 - › max rope speed: 54 m/min

Other Features:

- ◆ Front hydraulic stabilizers with control distributor
- ◆ Air line valve $1 \frac{1}{4}$ " hydraulic
- ◆ Pre-configured for future use with drifter
- ◆ Accident-prevention shut-off on drill mast
- ◆ Fire extinguisher / tool box
- ◆ Safety signal
- ◆ Painting: Hütte blue, RAL 5010