

## SIMBA M7C UNDERGROUND DRILL RIGS

### TECHNICAL SPECIFICATION



Long-hole drilling rig with top hammer rock drill. The Rig Control System (RCS) provides efficient and high precision drilling, longer consumable life and an ergonomic working environment. Ring drilling with parallel holes upwards/downwards up to 5.5 m apart. Hole diameter 51–89 (102) mm.

### Standard features

#### »Rock drill

- Atlas Copco COP 1800-series
- Dual-damping system for shock wave absorption and continuous rock contact for high penetration
- Lubricated and pressurized mating surfaces providing longer service intervals
- Shank adapters suitable for the given hole range

#### »Drilling unit

- Mechanized rod handling system
- Feed with hydraulic two-stage cylinder
- Front- and rear-mounted stingers
- Drill steel support for guidance during collaring and rod handling

#### »Positioning unit

- Boom mounted drilling unit
- Accurate, smooth and proportional movements
- Mine-adapted, sturdy components

#### »Control system

- Rig Control System (RCS)
- Automation level: ABC Basic
- Angle reading instrument
- Rotation Pressure Controlled feed (RPCF)
- Dampening Pressure Controlled Impact (DPCI)
- Pre-set parameters for different drilling conditions
- Anti-jamming system

#### »Carrier

- Mine-adapted carrier with articulated steering and four-wheel drive
- Low-emission, turbo-charged diesel engine

#### »General

- Operator panel mounted under canopy
- FOPS-approved protective roof
- Electrical cable reel
- Working lights under protective roof

# Specifications

## ROCK DRILL

| COP 1838ME                   |                             |
|------------------------------|-----------------------------|
| Shank adapter                | R32, TC35, T38, T45 (TDS64) |
| Hole diameter                | 51-89 (102) mm              |
| Impact power                 | 18 kW                       |
| Impact rate                  | 54 Hz                       |
| Hydraulic pressure, max.     | 250 bar                     |
| Rotation motors              | 07/09                       |
| Rotation speed               | 0-210/0-140 rpm             |
| Lub. air consump. (at 3 bar) | 8 l/s                       |
| Water consumption            | 100-250 l/min               |
| Weight                       | 171 kg                      |

## FEED

| BMH 200-series              | BMH 214  | BMH 215  | BMH 216  |
|-----------------------------|----------|----------|----------|
| Total length                | 3,160 mm | 3,465 mm | 3,770 mm |
| Drill rod length            | 1,220 mm | 1,525 mm | 1,830 mm |
| Total length with extractor | 3,365 mm | 3,670 mm | 3,975 mm |

## »Drilling unit

- Rod Handling System, RHS 17..... 17+1 rods
- Adaptable to R32, TC35, T38, T45 (TDS 64) drill rods
- Adaptable to 4', 5' and 6' rods
- Mechanized drilling up to 32 m
- Rock drill lubrication surveillance system

## »Positioning system

- Boom BUT 35BS (Ni-CR plated piston rods)
- Feed extension (with 4' drill steel)..... 900 mm
- Feed extension (with 5' and 6' drill steel) ..... 1,200 mm
- Boom extension..... 1,600 mm
- Rotary acurator BHR 30 for 360° ring drilling
- Stinger backward on feed .....BSJ 8-200
- Stinger forward on feed .....BSJ 8-115
- Feed dump, drilling ..... +90° forward and -10° backward
- Rig alignment laser

## »Control system

- Rig Control System (RCS) – versatile and upgradeable to a higher degree of automation
- Exposed components are designed and tested acc. to IP65
- USB-memory stick for transfer of data and storage of drill parameters
- Control panel mounted under canopy
- Drill settings for up to five different drill bits
- Integrated diagnostic system
- Angle reading instrument

## »Power pack

- System pressure, max..... 250 bar
- Hydraulic oil tank, volume max/min ..... 250/200l
- Filtration, absolute..... 16 µm
- Oil temperature gauge with thermostat
- Hydraulic pump for rotation, positioning, feed
- Water cooled oil cooler in stainless steel
- Low oil level indicator and shut-down
- Smart oil leakage shut-down system
- Hydraulic pump for percussion
- Electric oil filling pump
- Mineral hydraulic oil
- Oil filter indicator

## »Electrical system

- Total installed power ..... 118 kW
- Main motors ..... 2x55 kW
- Voltage..... 400–1,000 V
- Frequency ..... 50–60 Hz
- Transformer..... 8 kVA
- Working lights mounted on roof ..... 35W, 24VHID
- Electronic overload protection for electric motors
- Digital volt/amperage meter in electric cabinet
- Phase sequence indicator
- Earth fault indicator
- Battery charger
- Cable reel

## »Air system

- Screw-compressor ..... Atlas Copco GA 5
- Capacity at 5400 rpm and 7 bar ..... 20l/s
- Hydraulic driven axial piston motor ..... 10 cc
- Adjustable flow/pressure
- Digital air pressure gauge
- External air supply connection for hole blowing

## »Water system

- Capacity at 15 bar boost..... max 250 l/min
- Minimum water inlet pressure ..... 2 bar
- Hydraulic drive, axial piston motor ..... 10 cc
- Hydraulic driven water booster pump
- Digital water pressure gauge
- Water flow/pressure guard

## »Carrier

- Engine ..... Deutz TCD 2013L04 2V
- Power rating at 2,300 rpm..... 120 kW (163 hp)
- Tramming speed on flat ground ..... >15 km/h
- Tramming speed on incline 1:8 ..... >5 km/h
- Gradeability at max load on drive wheels..... 1:4
- Torque at 1,400 rpm ..... 572Nm
- Hydrodynamic..... Dana 24000 transmission
- Articulated steering..... ±41° steering angle
- Front axle ..... DANA Spicer 123/90
- Rear axle..... DANA Spicer 123/90, ±8° oscillation
- Tyres ..... 12.00 R24
- Clearance outside axles ..... 15°
- Hydraulic rear and front jacks..... 2x2
- Emergency and parking brakes ..... SAHR
- Fuel tank, volume..... 110 l
- Electric system ..... 24 V
- Batteries..... 2 x 125 Ah, 24V
- Tramming lights ..... 40W, 24V LED
- Service brakes 2 separate circuits (hydraulically applied, fully enclosed wet disc brakes)
- Automatic differential lock on front axle, limited slip
- Swingable seat for tramming/drilling, including safety belt
- Beacon warning lamp and break lights
- 12V outlet for communication radio
- Hydrostatic power steering system
- FOPS-approved protective roof
- Illuminated stairs for platform
- Central lubrication system
- Catalyser and silencer
- Four-wheel drive
- Boot washing kit
- Fire extinguisher
- Reverse alarm
- Warning horn
- Spirit levels

# Specifications

## DRILL STEEL

| Rock drill | Hole diameter, mm | Drill rod     | Shank adapter | Guide tubes   |
|------------|-------------------|---------------|---------------|---------------|
| COP 1838ME | 51-64             | R32 Speedrod  | R32           | TDS 45        |
| COP 1838ME | 64-76             | T38 Speedrod  | T38           | TDS 56/TDS 64 |
| COP 1838HE | 76-89             | T45 Speedrod  | T45           | TDS 64/TDS 76 |
| COP 2550UX | 89-102            | T51           | T51           | TDS 76        |
| COP 2550UX | 89-102            | TDS 64/TDS 76 | ST58          | N/A           |

## Optional equipment

### »Drilling system

- Water mist flushing, water oil cooler, external air supply
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- Hole blowing kit
- Dry drilling system
- COP 1838MEX/COP 1838HE/COP 1838HEX, COP 2550UX

### »Positioning system

- Automatic lubrication for positioning/drilling system
- Central lubrication for positioning/drilling system
- Rod handling system RHS 27 on request (up to 51 m)
- Thread lubrication kit
- Stinger extension pieces

### »Automation

- Simba ABC Regular
- Drill Plan Handling
- Full Drill Data Handling
- Rig Remote Access
- Breakthrough Automatic Stop
- Text Message System
- Remote Cradle Control/Remote Feed Control
- Void Detection
- Total station navigation

### »Water system

- Water hose reel with dual control

### »Power packs

- Heater kit

### »Electrical system

- Soft start for 400–700 V
- Electrical cable on reel, H07RN-F
- Electrical cable on reel, Buxflex
- PlugPC4
- PlugPC5
- SocketPC4
- SocketPC5
- Switchgear
- Electrical outlet, 16 A
- Extra transformer, 15 kVA
- Extra working lights, 2 x 200 W, 24 V (on tripod)

### »Cabin

- FOPS-approved cabin:
  - Mediaplayer with USB port
  - Boot washing kit
  - Air conditioning unit without heating
- Stainless steel cabin
- Air conditioner with heating
- Front window, 24 mm
- Swingable operators seat
- FOPS-approved grizzly bar for front window
- Reversing camera with monitor
- Joystick controlled spotlight

### »Carrier

- Fire suppression system, manual
- Fire suppression system, automatic (check-fire)
- Fire suppression system, full automatic
- Particle filter UNIKAT
- Brake lights
- L-carrier
- Solid tyres
- Deutz TCD 2013 L06 2V, 175 kW (238 hp)

### »Miscellaneous

- Manual rig washing kit
- Manual lubrication kit
- Hose and cable guide at water/cable reel
- Link-one parts book
- Remote operating kit
- Additional panel
- Manual spotlight