Simba S7 D

Technical specification

A versatile long hole drilling solution adapted for small- to medium-sized drifts. Drilling with hydraulic tophammer rock drill in the hole range 51–89 mm. Boom-mounted drilling unit for optimized reach and flexibility.

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 giving long service intervals
  - Shank adapters suitable for the given hole range

» **Drilling unit**
  - BMHP 6000-series heavy-duty aluminium hydraulic feed
  - Drill steel support for guidance during collaring and as support during rod handling
  - Front and rear-mounted stinger
  - Rod handling system

» **Hydraulic boom**
  - BUT 32PD boom with mine-adapted, sturdy components
  - Boom mounted drilling unit
  - Accurate and smooth movements

» **Control system**
  - Direct Control System (DCS II)
  - Damper Pressure Controlled Impact (DPCI)
  - Rotation Pressure Controlled Feed (RPCF)
  - Anti-jamming system
  - Angle reading instrument, ARI S7

» **Carrier**
  - Mine-adapted carrier for small- to medium-sized drifts with articulated steering and four-wheel drive
  - Four jacks for stable set-up

» **General**
  - Operator panel mounted under canopy
  - FOPS-approved telescopic protective roof
  - Working lights on protective roof
  - Hydraulically driven water booster pump
  - Hydraulically driven compressor
  - Cable reel
  - Optional cabin
**Specifications**

### ROCK DRILL

**COP 1838ME**

<table>
<thead>
<tr>
<th>Shank adapter</th>
<th>Rods in carousel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total length</td>
<td>3 141 mm</td>
</tr>
<tr>
<td>Drill rod length</td>
<td>1 220 mm</td>
</tr>
<tr>
<td>Total length with extractor</td>
<td>3 331 mm</td>
</tr>
</tbody>
</table>

**BMHP 6800**

<table>
<thead>
<tr>
<th>BMHP 6804</th>
<th>BMHP 6805</th>
<th>BMHP 6806</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total length</td>
<td>3 448 mm</td>
<td></td>
</tr>
<tr>
<td>Drill rod length</td>
<td>1 525 mm</td>
<td></td>
</tr>
<tr>
<td>Total length with extractor</td>
<td>3 665 mm</td>
<td></td>
</tr>
</tbody>
</table>

### Drilling unit
- Rod Handling System, RHS 10
- Adaptable to R32, T35, T38, (T45) drill rods
- Adaptable to 4', 5' and 6' rods
- Mechanized drilling up to 20 m
- Big hole drilling kit

### Positioning system
- Feed dump, drilling: +24° forward and -79° backward
- Boom extension: 1 250 mm
- Weight, boom only: 2 000 kg
- Angle Reading Instrument, AR1 S7
- Rig Alignment Laser (RAL)
- Boom BUT 32PD
- Rear stinger

### Control system
- Direct Control System, DCS II
- Low pressure hydraulics at operator panel
- Rock drill lubrication warning kit
- Percussion hour meter

### Power pack
- Hydraulic oil tank, volume, max.: 145 l
- Hydraulic pumps: 1 unit
- Filtration: 16 µm
- Operator’s control panel for rod handling
- Operator’s control panel for drilling
- Water/Oil cooler in stainless steel
- Oil temperature meter on oil tank
- Hydraulic oil thermostat
- Electric oil filling pump
- Pumps unloaded at start
- Low oil level indicator
- Mineral hydraulic oil
- Oil filter indicator

### Electrical system
- Total installed power: 80 kW
- Main motor: 75 kW
- Voltage: 380-1 000 V
- Frequency: 50–60 Hz
- Starting method: star/delta (380–690 V)
- Transformer: 5 kVA
- Working lights, mounted on roof: 3 x 35 W, 24 V HID
- Electronic overload protection for electric motors
- Digital volt/ampere meter in electric cabinet
- Limit switch for cable reel with signal lamp
- Manual spotlight, left side
- Phase sequence indicator
- Earth fault indicator
- Battery charger
- Cable reel

### Air system
- Compressor: Atlas Copco LE7
- Capacity at 5 400 rpm and 7 bar: 12 l/s
- Hole blowing kit with external air
- Lubricated air for the rock drill
- Adjustable flow/pressure
- Air pressure gauge
- Air flow guard

### Water system
- Hydraulic powered water booster pump: Flygt PXR411H
- Water booster pump max capacity at 12 bar: 60 l/min
- Min water inlet pressure, bar: 2
- Water flow guard

### Carrier
- Deutz 4-cylinder, D914 L04, EPA III/COM III (Tier 3/Stage IIIA) approved 4-stroke prechamber diesel engine
- Power rating at 2 300 rpm: 58 kW (77.8 hp)
- Torque at 1 500 rpm: 270 Nm
- Articulated steering: ±40° steering angle
- Gradeability at max. load on drive wheels: 1:4
- Front axle (wide): Dana 112
- Rear axle: Dana 112, ±7° oscillation
- Tyres: 9.00 x R20
- Clearance outside axles: 15°
- Hydraulic jacks, front: 2 extendable
- Hydraulic jacks, rear: 2
- Service brakes: 2 separate circuits
- Emergency and parking brakes: SAHR
- Fuel tank, volume: 60 l
- Electric system: 24 V
- Batteries: 2x12 V, 70 Ah
- Tramming lights: 6 x 40 W 24 V, LED and 2 x 70 w, 24 V
- Automatic differential lock on front axle
- 12V outlet for communication radio
- Hydrostatic power steering system
- Horn, beacon and reverse alarm
- Boots washing arrangement
- Hydrostatic transmission
- Fixed seat for tramming
- Central grease point
- Exhaust catalyster
- Illuminated stairs
- Four-wheel drive
- Fire extinguisher
- Swingable seat
- Hand throttle
- Brake lights
- Safety belt
- Halogen
**Specifications**

### DRILL RODS

<table>
<thead>
<tr>
<th>Rock drill</th>
<th>Hole diameter, mm</th>
<th>Drill rod</th>
<th>Shank adapter</th>
<th>Guide tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP 1838ME</td>
<td>51–64</td>
<td>R32 Speedrod</td>
<td>R32</td>
<td>N/A</td>
</tr>
<tr>
<td>COP 1838ME/MUX</td>
<td>51-64</td>
<td>TC35 Speedrod</td>
<td>TC35</td>
<td>N/A</td>
</tr>
<tr>
<td>COP 1838ME/MUX</td>
<td>64–76</td>
<td>T38 Speedrod</td>
<td>T38</td>
<td>TDS 56</td>
</tr>
<tr>
<td>COP 1838HE/HUX</td>
<td>76–89</td>
<td>(T45 Speedrod)</td>
<td>(T45)</td>
<td>TDS 64</td>
</tr>
</tbody>
</table>

### NOISE AND VIBRATION

<table>
<thead>
<tr>
<th>Specification</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator sound pressure level in canopy, drilling, free field (ISO 11201)</td>
<td>106±6 dB(A) re 20uPa</td>
</tr>
<tr>
<td>Operator sound pressure level in cabin, drilling, free field (ISO 11201)</td>
<td>75± 3 dB(A) re 20uPa</td>
</tr>
<tr>
<td>Operator sound pressure level working close to machine, drilling, free field</td>
<td>106±6 dB(A) re 20uPa</td>
</tr>
<tr>
<td>Sound power level (ISO 3744), drilling, free field</td>
<td>126 dB(A) re 1pW</td>
</tr>
<tr>
<td>Vibration levels seated in canopy, drilling (ISO 2631-1)</td>
<td>0.1+ 0.15 m/s²</td>
</tr>
<tr>
<td>Vibration levels seated in cabin, drilling (ISO 2631-1)</td>
<td>0.07+ 0.07 m/s²</td>
</tr>
<tr>
<td>Vibration levels standing in canopy, drilling (ISO 2631-1)</td>
<td>0.1+ 0.15 m/s²</td>
</tr>
<tr>
<td>Vibration levels standing in cabin, drilling (ISO 2631-1)</td>
<td>0.07+ 0.07 m/s²</td>
</tr>
</tbody>
</table>

### Optional equipment

**» Drilling system**
- COP 1638, COP 1838MUX, COP 1838HE, COP 1838HUX
- Water mist flushing, water oil cooler, external air supply
- Water mist flushing, air oil cooler, external air supply
- Hole blowing kit with internal air

**» Positioning system / Drilling unit**
- Automatic lubrication for positioning system
- Central lubrication for positioning system
- Thread lubrication kit

**» Power pack**
- Heater kit for hydraulic oil tank

**» Water system**
- Water hose reel
- Water hose

**» Carrier**
- Fire suppression system ANSUL, checkfire release
- Fire suppression system ANSUL, manual release

**» Cabin**
- FOPS-approved cabin, noise level <80 dB(A), height 2 800 mm including:
  - Front window 16 mm
  - Air conditioning unit
  - Fixed seat
  - Boots washing
  - CD/USB player
  - Swingable seat for drilling
- Cabin body made of stainless steel
- Front window, 24 mm
- Electrical heater, 1.2 kW, 230 V (CE)

**» Electrical system**
- Starting method - soft start (not for 1 000 V)
- Electrics according to local standards
- Stainless steel electrical enclosure
- Electrical cable on reel, H07RN-F
- Working lights, 2x200 W, 24 V
- Electrical cable on reel, Buflex
- Socket PC4/PC5
- Plug PC4/PC5
- Switch gear

**» Miscellaneous**
- Rod holder for extra drill rods
- Shelf for bits and tools
- Manual lubrication kit
- Ni-Cr piston rods
- Rig washing kit
Measurements

**SIDE VIEW**

**TURNING RADIUS**

depending on surface

<table>
<thead>
<tr>
<th>mm</th>
<th>Outer</th>
<th>5,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner</td>
<td>2,850</td>
<td></td>
</tr>
</tbody>
</table>

**DIMENSIONS**

<table>
<thead>
<tr>
<th>mm</th>
<th>Width</th>
<th>2,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height tramming, roof down</td>
<td>2,100</td>
<td></td>
</tr>
<tr>
<td>Height roof up</td>
<td>2,800</td>
<td></td>
</tr>
<tr>
<td>Length tramming (with BMHP 6804/05/06)</td>
<td>8,905*+ / 1,112*/ 9,417*</td>
<td></td>
</tr>
<tr>
<td>Ground clearance</td>
<td>335</td>
<td></td>
</tr>
</tbody>
</table>

* = 200 mm with extractor

**WEIGHT**

<table>
<thead>
<tr>
<th>kg</th>
<th>Total</th>
<th>11,800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boom side</td>
<td>7,800</td>
<td></td>
</tr>
<tr>
<td>Engine side</td>
<td>4,000</td>
<td></td>
</tr>
</tbody>
</table>

**RECOMMENDED DRIFT SIZE**

<table>
<thead>
<tr>
<th>Feed</th>
<th>Rod</th>
<th>Minimum* (h x w)</th>
<th>Maximum** (h x w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMHP 6804</td>
<td>1,220</td>
<td>3.3 x 3.3</td>
<td>7.2 x 8.5</td>
</tr>
<tr>
<td>BMHP 6805</td>
<td>1,525</td>
<td>3.7 x 3.7</td>
<td>7.5 x 8.8</td>
</tr>
<tr>
<td>BMHP 6806</td>
<td>1,830</td>
<td>4.4 x 4</td>
<td>7.8 x 9.1</td>
</tr>
</tbody>
</table>

* Minimum without extractor, with +200 mm
** Maximum with extractor

**COP 1638: RECOMMENDED CABLE SIZE AND LENGTH**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Type</th>
<th>Dimension, mm²</th>
<th>Diameter, mm</th>
<th>Length, m</th>
</tr>
</thead>
<tbody>
<tr>
<td>380–400 V</td>
<td>H07RN-F</td>
<td>4x70</td>
<td>49</td>
<td>70</td>
</tr>
<tr>
<td>440 V</td>
<td>H07RN-F</td>
<td>4x70</td>
<td>49</td>
<td>70</td>
</tr>
<tr>
<td>500–525 V</td>
<td>H07RN-F</td>
<td>3x70+3G16</td>
<td>45</td>
<td>100</td>
</tr>
<tr>
<td>550–575 V</td>
<td>H07RN-F</td>
<td>3x70+3G16</td>
<td>45</td>
<td>100</td>
</tr>
<tr>
<td>660–690 V</td>
<td>H07RN-F</td>
<td>3x70+3G16</td>
<td>39</td>
<td>135</td>
</tr>
<tr>
<td>1,000 V</td>
<td>H07RN-F</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Recommendations are given for surrounding temperature of 40 °C and up to a height of 2,000 m.