Atlas Copco Production drilling rigs

Simba 1354
Technical specification

Production drilling rig adapted for small- to medium-sized drifts. Equipped with tophammer rock drill for the hole range 51–89 (102) mm and a versatile positioning unit to match various methods in production drilling.

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

» Positioning unit
• Tilt, rotation, pendulum arm and slide table
• Accurate and smooth movements
• Mine-adapted, sturdy components

» Control system
• Electrical Direct System (EDS)
• Anti-jamming system

» Carrier
• Mine-adapted carrier for small- to medium-sized drifts with articulated steering and four-wheel drive

» General
• Trolley-mounted operator panel
• FOPS-approved protective roof
• Electrical cable reel
• Working lights on tripods
Specifications

<table>
<thead>
<tr>
<th>ROCK DRILL</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP 1838ME</td>
</tr>
</tbody>
</table>

- Shank adapter: R32, T38, T45, (T51)
- Hole diameter: 51–89 mm
- Impact power: 18 kW
- Impact rate: 54 Hz
- Hydraulic pressure, max.: 250 bar
- Rotation motors: Separate rotation
- Rotation speed: 0–210/0–140 rpm
- Lub. air consump. (at 3 bar): 5 l/s
- Water consumption: 50 l/min
- Weight: 171 kg

<table>
<thead>
<tr>
<th>FEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMH 200</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Total length</td>
</tr>
<tr>
<td>Drill rod length</td>
</tr>
<tr>
<td>Total length with extractor</td>
</tr>
</tbody>
</table>

» Drilling unit
- Rod Handling System, RHS 17..................17+1 rods
- Adaptable to 4', 5' and 6' rods
- Adaptable to R32, T38, T45, (T51) Speedrods
- Adaptable to TDS 56 and TDS 64 drill tubes
- Mechanized drilling up to 32 m

» Positioning system
- Feed extension (with 4' drill steel)..............900 mm
- Feed extension (with 5' and 6' drill steel)......1 200 mm
- Rotary Acurator BHR 60-2 for 360° ring drilling
- Sliding table BHT 150 gives 1.5 m feed parallel positioning
- Pendulum arm, BHP 150 gives 1.5 m feed parallel positioning in the side walls. Adds additional 1.5 m feed parallel positioning upwards/downwards.
- Stinger backward on feed........................BSJ 8-200
- Stinger forward on feed............................BSJ 8-115
- Feed dump, drilling...............................+20° forward and -65° backward
- Rig Alignment Laser..............................RAL650

» Control system
- Electrical Direct System, EDS
- Basic functions such as semi-automatic drilling and anti-jamming included

» Power pack
- Hydraulic pump for percussion, positioning, feed
- Hydraulic pump for rotation
- Pumps unloaded at start
- System pressure, max...............................230 bar
- Hydraulic oil tank, volume.........................160 l
- Low oil level indicator and shut-down
- Oil temperature gauge on oil tank
- Electric oil filling pump
- Filtration, absolute..................................16 µm
- Oil filter indicator
- Water cooled oil cooler in stainless steel
- Mineral hydraulic oil
- Rock drill lubrication warning kit
- Hydraulic oil thermostat

» Electrical system
- Total installed power............................70 kW
- Main motor at 50 Hz..............................55 kW
- Voltage..............................................380–1 000 V
- Frequency............................................50–60 Hz
- Starting method........star/delta (380–690 V) direct (1 000 V)
- Thermal overload protection for electric motors
- Percussion hour meters on A-panel
- Digital volt/ampere meter in electric cabinet
- Phase sequence indicator
- Earth fault indicator
- Battery charger
- Transformer........................................4 kVA
- Cable reel
- Limit switch for cable reel
- Working lights on tripods.......................2 x 200 W, 24 V

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

» Water system
- Electrically driven water booster pump
- Capacity at 10 bar boost..........................max 100 l/min
- Min water inlet pressure..........................2 bar
- Water pressure gauge
- 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........................55 kW (75 hp)
- Torque at 1 500 rpm.............................270 Nm
- Fixed seat for trimming, including safety belt
- Articulated steering..............................±41° steering angle
- Four-wheel drive
- FOPS-approved protective roof
- Hydrostatic power steering system
- Hydrodynamic transmission..........................Dana T12000
- Front axle ...........................................Dana 176
- Rear axle............................................Dana 176, ±8° oscillation
- Tyres...................................................12.00 x R20
- Batteries..............................................2 x 70 Ah
- Clearance outside axles..........................................................15°
- Hydraulic jacks, front..............................2 extendable
- Hydraulic jacks, rear..............................2
- Service brakes 2 separate circuits (hydraulically applied, fully enclosed wet disc brakes)
- Emergency and parking brakes.................SAHR
- Fuel tank, volume....................................60 l
- Electric system.....................................24 V
- Power rating....................................2 x 70 Ah
- Tramming lights.................................8 x 70 W
- Brake lights
- Illuminated stairs for platform
- Central lubrication system
- Catalyser and silencer
- Fire extinguisher
- Spirit levels
- Gradeability at max load on drive wheels.........1:4
- Tramming speed, flat ground/incline 1:8......>10/>4 km/h
- Horn, beacon and reverse alarm
- 12V Outlet
- Rig Alignment Laser, RAL 650
Specifications

DRILL STEEL

<table>
<thead>
<tr>
<th>岩钻</th>
<th>孔直径, mm</th>
<th>钻杆</th>
<th>端部适配器</th>
<th>导管</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP 1838ME</td>
<td>51–64</td>
<td>R32 Speedrod</td>
<td>R32</td>
<td>TDS 45</td>
</tr>
<tr>
<td>COP 1838ME</td>
<td>64–76</td>
<td>T38 Speedrod</td>
<td>T38</td>
<td>TDS 56/TDS 64</td>
</tr>
<tr>
<td>COP 1838HE</td>
<td>76–89</td>
<td>T45 Speedrod</td>
<td>T45</td>
<td>TDS 64/TDS 76</td>
</tr>
<tr>
<td>COP 2550UX</td>
<td>76–89</td>
<td>T45</td>
<td>T45</td>
<td>TDS 64</td>
</tr>
<tr>
<td>COP 2550UX</td>
<td>89（–102）</td>
<td>T51</td>
<td>T51</td>
<td>TDS 76</td>
</tr>
<tr>
<td>COP 2550UX</td>
<td>89–102</td>
<td>TDS 64/TDS 76</td>
<td>ST58</td>
<td>N/A</td>
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</tbody>
</table>

Optional equipment

- **Drilling system**
  - 水雾冲洗，水冷，外部空气供给
  - 水雾冲洗，空气冷却，外部空气供给
  - COP 1838MUX, COP 1838HE, COP 1838HUX, COP 2550UX

- **Positioning system**
  - 角度读取仪，ARI 6C，带/不带孔径深度测量
  - 线螺润滑装置
  - 管道处理系统RHS 27（51 m范围）
  - 定位/钻孔系统中央润滑
  - 补充钻杆反向

- **Carrier**
  - 消防抑制系统ANSUL（手动，Checkfire或自动）

- **Electrical system**
  - 电缆缆盘，Buflex
  - 插座PC4
  - 套接字PC4
  - 选择开关
  - 遵循当地标准的电器
  - 三脚架上的工作灯，2x500 W，230 V

- **Water system**
  - 水管卷盘

- **Miscellaneous**
  - 手动润滑装置
  - 水箱清洗装置
  - 钻头和工具架
  - 手动聚光灯
Measurements

SIDE VIEW

FRONT VIEW

DIMENSIONS

<table>
<thead>
<tr>
<th>mm</th>
<th>Width</th>
<th>1 950</th>
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<tbody>
<tr>
<td></td>
<td>Height tramming</td>
<td>3 180</td>
</tr>
<tr>
<td></td>
<td>Height roof up</td>
<td>2 960</td>
</tr>
<tr>
<td></td>
<td>Length (with BMH 214/215/216) (B)</td>
<td>8 209/8 486/8 763</td>
</tr>
<tr>
<td></td>
<td>Ground clearance</td>
<td>280</td>
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</table>

WEIGHT

| kg   | Total  | 15 000 |

COVERAGE AREA

TURNING RADIUS

<table>
<thead>
<tr>
<th>depending on surface</th>
<th>mm</th>
<th>Outer</th>
<th>5 440</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Inner</td>
<td>2 990</td>
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</tbody>
</table>

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>Buflex</td>
<td>3x70+3G16+2x1.5</td>
<td>37 mm</td>
<td>95 m</td>
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<tr>
<td>440–575 V</td>
<td>Buflex</td>
<td>3x50+3G10+2x1.5</td>
<td>32 mm</td>
<td>140 m</td>
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<tr>
<td>660–690 V</td>
<td>Buflex</td>
<td>3x35+3G6+2x1.5</td>
<td>28 mm</td>
<td>185 m</td>
</tr>
<tr>
<td>1 000 V</td>
<td>Buflex</td>
<td>3x35+3G6+2x1.5</td>
<td>28 mm</td>
<td>185 m</td>
</tr>
</tbody>
</table>

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