The Sandvik DT820 is a two boom electro hydraulic jumbo for fast and accurate drilling in tunneling and cavern excavation of 12 - 110 m² cross sections.

The hydraulic controlled drilling system with added automatic functions and different optional instrumentation levels enable productive and high quality excavation.

The RDX5 rock drills deliver superior performance with high consumable life, lowering operating costs and giving long service interval.

The SB90 universal booms have a large optimum shaped coverage and full automatic parallelism. The booms can also be used for cross-cutting and bolt hole drilling.

An optional utility boom for bolting and utility works is available. The powerful 4-wheel-drive center articulated carrier ensures rapid and safe tramming with good balance.

### KEY FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage area</td>
<td>110 m² (14 210 x 8 420 mm)</td>
</tr>
<tr>
<td>Hydraulic rock drill</td>
<td>2 x RDX5 (20 kW)</td>
</tr>
<tr>
<td>Drill feed</td>
<td>2 x TF500-16'</td>
</tr>
<tr>
<td>Boom</td>
<td>2 x SB90</td>
</tr>
<tr>
<td>Control system</td>
<td>THC560, hydraulic</td>
</tr>
<tr>
<td>Hole length</td>
<td>Up to 6 180 mm</td>
</tr>
<tr>
<td>Turning width (T-section)</td>
<td>4 840 mm (with TF500-16')</td>
</tr>
<tr>
<td>Transport / drilling width</td>
<td>2 500 mm / 3 000 mm</td>
</tr>
<tr>
<td>Transport / drilling height</td>
<td>2 750 mm / 3 600 mm</td>
</tr>
<tr>
<td>Transport length</td>
<td>14 930 mm (with TF500-16')</td>
</tr>
<tr>
<td>Total weight (without utility boom)</td>
<td>26 500 kg</td>
</tr>
<tr>
<td>Total weight (with utility boom)</td>
<td>28 900 kg</td>
</tr>
</tbody>
</table>
HYDRAULIC ROCK DRILL

<table>
<thead>
<tr>
<th>Type of rock drill</th>
<th>RDX5 (TS2-433)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percussion power</td>
<td>20 kW</td>
</tr>
<tr>
<td>Percussion pressure</td>
<td>Max. 220 bar</td>
</tr>
<tr>
<td>Percussion rate</td>
<td>67 Hz</td>
</tr>
<tr>
<td>Rotation speed</td>
<td>Max. 250 rpm (with OMS125)</td>
</tr>
<tr>
<td>Rotation torque</td>
<td>625 Nm (with OMS125)</td>
</tr>
<tr>
<td>Hole size (drifting)</td>
<td>43 - 64 mm</td>
</tr>
<tr>
<td>Hole size (cut hole)</td>
<td>76 - 127 mm</td>
</tr>
<tr>
<td>Recommended rod</td>
<td>T38 - Hex 35 - R32, T38 - Hex 35 - Alpha 330, T38 - Hex 35 - R35</td>
</tr>
<tr>
<td>Shank adapter (male)</td>
<td>T38</td>
</tr>
<tr>
<td>Weight</td>
<td>210 kg</td>
</tr>
<tr>
<td>Length</td>
<td>955 mm</td>
</tr>
<tr>
<td>Profile height</td>
<td>87 mm</td>
</tr>
</tbody>
</table>

HYDRAULIC SYSTEM

- Powerpack: HPP555 (2 x 55 kW)
- Percussion pump: 110 cc (variable)
- Rotation pump: 60 cc (variable)
- Filtration size (pressure / return): 20 µ / 10 µ
- Oil tank volume: 290 liters
- Filling pump for hydraulic oil: Electric
- Cooler for hydraulic oil: OW30 oil-to-water (2 x 30 kW)

UTILITY BOOM (OPTIONAL)

- Type of utility boom: SUB3A (TS2-307)
- Boom extension: 2 x 2 000 mm
- Boom weight, net: 2 650 kg
- Roll-over angle: 358°
- Max allowed load: 510 kg
- Max allowed load with safety canopy: 400 kg

BOOM

- Type of boom: SB90 (TS2-265)
- Parallel coverage: 90 m²
- Parallelism: Hydraulic
- Boom extension: 1 600 mm
- Feed extension: 1 650 mm
- Boom weight, net: 2 650 kg
- Roll-over angle: 358°

FEED

- Type of feed: TF500-12 Optional, TF500-14 Optional, TF500-16 Standard, TF500-18 Optional, TF500-20 Optional
- Feed force (Max.): 25 kN, 25 kN, 25 kN, 25 kN, 25 kN
- Total length: 5 270, 5 880, 6 490, 7 100, 7 710
- Hole length: 3 440, 4 050, 4 660, 5 270, 5 880
- Rod length: 3 700, 4 305, 4 915, 5 525, 6 135
- Net weight (kg): 500, 530, 560, 590, 620

AIR AND WATER SYSTEM

- Flushing of holes: By water
- Water booster pump type: WBP2 (11 kW)
- Water pump capacity: 100 l/min at 15 bar (5 bar inlet)
- Water pump inlet pressure: 2 - 7 bar
- Flushing water pressure: 10 - 15 bar
- Shank lubrication device: SLU-2 (air / oil mist)
- Air compressor: CTN10 (1.0 m³/min at 7 bar)
- Oil consumption: 180 - 250 g/h
- Air consumption: 250 - 350 l/min

ELECTRIC SYSTEM

- Standard voltage: 380 - 690 V (± 10%)
- Total input power: 135 kW
- Main switch: MSE20
- IP classification: Specification TS2-132
- Starting method: Star-delta starter 380 - 690 V
- Automatic cable reel: TCR4E
- Cable reel control (in / out): Operator station
- Front lights (combined working and driving): 8 x 35 W HID (24V)
- Rear lights (combined working and driving): 4 x 35 W HID (24 V)
- Rear parking / brake lights: 1 x Red LED (24V)
- Stair case service lights: LED (24V)

DRILLING CONTROL SYSTEM

- Type of control system: THC560 (TS2-361)
- Operating principle: Hydraulic control
- Manual boom control: Fully proportional, Hydraulic parallelism
- Drilling control: Anti-jamming system, Flushing control
- Automatic cycle: Stop and return automatics

OPERATOR’S SAFETY CANOPY

- Canopy certification: FOPS (ISO 3449)
- Unit height in tramming: 3 600 mm
- Sound pressure level according to EN 16228: Cabin < 103 dB(A), Emitted 126 dB(A)
- Operation: Standing drilling, seated tramming

2. SANDVIK DT820 - TUNNELING DRILL
## CARRIER

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of carrier</td>
<td>TC8 (frame-steered)</td>
</tr>
<tr>
<td>Carrier articulation</td>
<td>± 37°</td>
</tr>
<tr>
<td>Rear axle oscillation</td>
<td>± 8°</td>
</tr>
<tr>
<td>Ground clearance</td>
<td>400 mm</td>
</tr>
<tr>
<td>Diesel engine</td>
<td>MB OM904LA, 110 kW, Tier 3, Stage IIIA</td>
</tr>
<tr>
<td>Transmission</td>
<td>Hydrodynamic, Spicer T20 000</td>
</tr>
<tr>
<td>Axles</td>
<td>Dana Spicer 113 (front and rear)</td>
</tr>
<tr>
<td>Tires</td>
<td>14.00-24 PR28</td>
</tr>
<tr>
<td>Service brakes</td>
<td>Hydraulically applied wet disc brakes</td>
</tr>
<tr>
<td>Parking / emergency brakes</td>
<td>SAHR type, fail safe wet disc brakes</td>
</tr>
<tr>
<td>Fuel tank</td>
<td>150 liters</td>
</tr>
<tr>
<td>Tramming speed</td>
<td>Horizontal (0%): 16 km/h 14% = 1.7 = 8°: 5.4 km/h</td>
</tr>
<tr>
<td>Gradeability / sideways tilt</td>
<td>Max. 15°/ 5°</td>
</tr>
<tr>
<td>Carrier stabilization</td>
<td>TJ60 (front), TJ75 (rear)</td>
</tr>
<tr>
<td>Hand throttle</td>
<td>Standard</td>
</tr>
<tr>
<td>Hand held fire extinguisher</td>
<td>7.7 kg (type ABC)</td>
</tr>
<tr>
<td>Carrier centralized greasing</td>
<td>Specification TS2-463</td>
</tr>
<tr>
<td>Tramming alarm</td>
<td>Standard</td>
</tr>
<tr>
<td>Knowledge Box™</td>
<td>Connectivity solution (TS2-535)</td>
</tr>
<tr>
<td>Colour scheme</td>
<td>Sandvik standard</td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
</tr>
</tbody>
</table>

### OPTIONAL ITEMS

#### Feed
- **Feed length**: 12', 14', 18', 20'
- **Telescopic feed**: TFX6/12, TFX8/14, TFX10/16
- **Rod retainer**: TRR1 with TF or TFX feed (incl. safety wire)

#### Utility boom
- **Safety canopy**: FOPS approved
- **Spot lights**: 2 x 17 W LED
- **Rod racks**: For 4 pcs of 10 or 12 ft rods
- **RX expansion bolt installation kit**: D30 mm or D41 mm

#### Hydraulic system
- **Utility boom pump**: 60cc (gear)
- ***Filling pump for hydraulic oil**: Manual
- ***Biodegradable oils**: Shell Naturelle HFE46/68

#### Control system
- **Constant speed drilling**: Replaces feed / percussion control
- **Drilling instrument**: TMS+

#### Cleaning system
- **Low pressure system with reel**: Up to 15 bar (TS2-343)
- **High pressure system with reel**: Up to 180 bar (TS2-343)

#### Greasing systems
- **Automatic system**: Lincoln (for carrier, boom, rod handler and utility boom)
- **Manual system**: Specification TS2-463

### Electric system
- **Voltage option**: 1 000 V (50 Hz), DOL starting system
- **Electric cables**: Specification TS2-121
- **Spooling device for cable reel**: For voltages 690 - 1 000 V
- **Ground fault and overcurrent unit**: VYK
- **Electric outlet on front carrier**: 1 x 400 V or 2 x 230 V 16A
- **Remote control for reel(s)**: At rear machine
- **Amber flashing light**: LED (24 V)

#### Air and water system
- **Flushing flow supervision**: 2 booms
- **Air compressor**: CTN16 (1.6 m³/min at 7 bar)
- **Air mist flushing**: External air / water supply (incl. IP5 air cleaner)
- **End of hole flushing**: 2 x 80 liters receiver (incl. IP5 air cleaner)
- **External air connection**: IP5 air cleaner
- **Water hose reel**: THR2.5E with 38 mm (1 ½”), 65 m
- **Water hose**: 38 mm (1 ½”), 65 m
- **Operator’s safety canopy**: Reduced tramming speed
- **Operator’s safety canopy**: 3rd gear lockout

#### Fire suppression system
- **Additional fire extinguisher**: 7.7 kg (type ABC)
- **Manual system**: Ansal, 6 nozzles (TS2-460)
- **Automatic system**: Ansal, 6 nozzles (TS2-460)

#### Carrier
- **High speed carrier**: TC8, incl. MB OM906LA, 170 kW, Tier 3, Stage IIIA, with Spicer T32 000 transmission
- **Exhaust catalyzer**: For Tier 3 engines
- **Fast filling system**: For fuel or complete
- **Rodack on carrier side**: 12 to 20 ft rods
- **Tramming camera**: Rear
- **Wheel chocks and holders**: 2 pieces

### Extra items
- **Spare rock drill**: RDX5
- **Spare wheel assembly**: Standard
- **Special tools for rock drill**: Field tool set (TS2-434)
- **Tunnel laser set**: Complete tool set (TS2-435)
- **Documentation**: Extra manuals

*Replaces standard feature*
### Feed length
- TF500-12’: 5 330 mm
- TF500-14’: 5 940 mm
- TF500-16’: 6 550 mm
- TF500-18’: 7 160 mm
- TF500-20’: 7 770 mm

### Overall length
- TF500-12’: 14 680 mm
- TF500-14’: 14 900 mm
- TF500-16’: 14 900 mm
- TF500-18’: 15 350 mm
- TF500-20’: 16 400 mm

### Overall length with TRR1
- TF500-12’: 14 710 mm
- TF500-14’: 14 930 mm
- TF500-16’: 14 930 mm
- TF500-18’: 15 380 mm
- TF500-20’: 16 430 mm

### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Angle (A)</th>
<th>Radius (R)</th>
<th>T-cross (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT820 (TF500-12’)</td>
<td>37°</td>
<td>7 940 mm</td>
<td>4 730 mm</td>
</tr>
<tr>
<td>DT820 (TF500-14’)</td>
<td>37°</td>
<td>7 940 mm</td>
<td>4 730 mm</td>
</tr>
<tr>
<td>DT820 (TF500-16’)</td>
<td>37°</td>
<td>8 050 mm</td>
<td>4 840 mm</td>
</tr>
<tr>
<td>DT820 (TF500-18’)</td>
<td>37°</td>
<td>8 190 mm</td>
<td>4 980 mm</td>
</tr>
<tr>
<td>DT820 (TF500-20’)</td>
<td>37°</td>
<td>8 300 mm</td>
<td>5 090 mm</td>
</tr>
</tbody>
</table>

All dimensions in mm

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