



SANDVIK DT821-C TUNNELING DRILLS

TECHNICAL SPECIFICATION

Sandvik DT821-C is a two boom electro hydraulic jumbo for fast and accurate drilling in tunneling and cavern excavation. The hydraulic controlled drilling system with added automatic functions and optional instrumentation enable productive and high quality excavation. Sandvik RD520 rock drills deliver superior performance with high consumable life.

Sandvik SB90 universal booms have a large optimum shaped coverage and full automatic parallelism. In addition to face drilling the unit can also be used for crosscutting 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. Noise and vibration insulated cabin provides ergonomic and extremely comfortable working place with excellent visibility during tramming and drilling.

KEY FEATURES

Hydraulic rock drill	Sandvik RD520
Drill feed	Sandvik TF500-16'
Boom	Sandvik SB90
Control system	Sandvik THC561
Coverage area	14,210 x 8,420 mm (110 m ²)
Hole length	Up to 6,180 mm
Turning width (T-section)	4,730 mm (with TF500-14')
Tramming / drilling width	3,000 mm / 3,000 mm
Transport width	2,500 mm
Transport height	3,600 mm (*3,190 mm)
Transport length	14,930 mm (with TF500-16')
Total weight	27,000 kg (without utility boom) depending on options
Total weight	29,400 kg (with utility boom) depending on options

** Low mounted cabin*



HYDRAULIC ROCK DRILL

TECHNICAL SPECIFICATION 2-1950

Rock drill	Sandvik RD520
Percussion power	20 kW
Percussion pressure	Max. 220 bar
Percussion rate	74 Hz
Stabilizer	Hydraulic
Rotation speed	Max. 280 rpm (with OMS125)
Rotation torque	625 Nm (with OMS125)
Hole size (drifting)	43 - 64 mm
Hole size (cut hole)	76 - 127 mm
Recommended rod	T38 - H35 - R32 T38 - R39 - R35
Shank adapter	T38 (male)
Weight	225 kg
Length	1,010 mm
Profile height	90 mm
Shank lubrication device	Air / oil mist, SLU-2
Air consumption	250 - 350 l/min
Oil consumption	180 - 250 g/h

Options

- Sandvik HLX5 instead of Sandvik RD520.
- Power extractor.

Options

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

HYDRAULIC SYSTEM

Powerpack	HPP555 (2 x 55 kW)
Percussion pump	110 cc (variable)
Rotation pump	60 cc (variable)
Filtration size	20 micron (pressure) 10 micron (return)
Oil tank volume	290 liters
Tank filling	Electric pump
Oil cooler	Water cooled. Cooling capacity 2 x 30 kW

Options

- Utility boom pump 60cc (gear).
- Manual oil filling pump instead of electric.
- Vacuum pump for hydraulic system.
- Biodegradable oils. Shell Naturelle HFE46 / HFE68.

BOOM

TECHNICAL SPECIFICATION 4-3205

Boom type	Sandvik SB90
Parallel coverage	90 m ²
Parallelism	Hydraulic
Boom extension	1,800 mm
Feed extension	1,650 mm
Boom weight, net	2,650 kg
Roll-over angle	358°

FEED

TECHNICAL SPECIFICATION 3-1400

Feed type	Feed force (Max.)	Total length (mm)	Hole length (mm)	Rod length (mm)	Net weight (kg)
TF512	25 kN	5,270	3,440	3,700	500
TF514	25 kN	5,880	4,050	4,305	530
TF516	25 kN	6,490	4,660	4,915	560
TF518	25 kN	7,100	5,270	5,525	590
TF520	25 kN	7,710	5,880	6,135	620

Options

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

UTILITY BOOM (OPTIONAL)

TECHNICAL SPECIFICATION 4-3420

Boom type	SUB3A
Boom extension	2 x 2,000 mm
Boom weight, net	2,350 kg
Max allowed load	510 kg
Max allowed load with safety canopy	400 kg

CONTROL SYSTEM

TECHNICAL SPECIFICATION 5-1020

Type	THC561, hydraulic
Manual boom control	Direct control Fully proportional Hydraulic parallelism
Drilling control	Feed / percussion control
Automatic cycle	Stop and return automatics

Options

- Constant speed drilling. Replaces feed / percussion control.
- Instrumentation TCAD+ with iSURE I-II design and reporting.
- iSure III Analysis (with TCAD+ option).
- Extra display for TCAD+

ELECTRIC SYSTEM

Total input power	135 kW
Main switch	MSE20
IP classification	Spec. sheet TS2-132
Standard voltage	380 - 690 VAC (± 10%)
Starting method	Star-delta starter 380 - 690 VAC
Automatic cable reel	TCR4E
Cable reel control (in / out)	Operator station
Front lights (combined working and driving)	8 x 50 W LED (24VDC)
Rear lights (combined working and driving)	4 x 50 W LED (24 VDC)
Rear brake / park lights	2 x Red LED

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Options

- Optional voltage. 1,000 VAC, 50 Hz.
- Electric cable rubber or PUR. Spec sheet TS2-121.
- Spooling device for cable reel. for voltages 690 - 1,000 VAC
- Electricity outlet in front carrier. 1 x 400 VAC or 1 x Main voltage.
- Remote control for reel(s) at rear machine.
- Amber strobe light. Flashing (24VDC).

FLUSHING SYSTEM

Flushing	Water
Water pump type	WBP2 HP (11 kW)
Water pump capacity	200 l/min
Water pump inlet pressure	2 - 7 bar (Min.)
Flushing water pressure	10 - 15 bar
Air compressor	CTN10, 1 m³/min (7 bar, 7.5 kW)

Options

- Flushing flow supervision.
- Air cleaning of hole in addition to water flushing. CTN16 air compressor.
- Air mist flushing. External air / water supply (incl. IP5 air cleaner).
- Additional air capacity for hole cleaning with air. 2 x 80 liters receiver (incl. IP5 air cleaner).
- External air connection. IP5 air cleaner.
- Water hose reel. THR2.5E. (incl. water hose 38 mm (1 ½"), 65 m).

TRAMMING AND OPERATOR STATION

Tramming speed	16 km/h (Horizontal) 5.4 km/h (14%=1:7=8°)
Gradeability / inclination	Max. 15° / 5°
Safety cabin	FOPS (ISO 3449)
Operation	Standing drilling, seated tramming
Sound pressure level	According to EN791 Operator station: 79 db(A) Emitted: 125 db(A)
Stairs and service lights	LED lights
Floor	Water-washable
Air conditioning	Filtering capacity EU6/7
Cabin heating	During tramming and drilling
Electricity outlets	1 x 12 VAC

Options

- Stainless steel cabin. FOPS (ISO 3449).
- Low mounted cabin. Height 3,190 mm.
- Reduced tramming speed. 3rd gear lockout.
- Reversing camera the rear and side of the machine.
- Boot washer at cabin entrance.
- CD/MP3 player with radio.

CARRIER

Carrier	Sandvik TC8
Carrier type	Frame steering, Orbitrol
Frame steering	± 37°
Rear oscillation	± 8°
Ground clearance	400 mm
Diesel engine	MB OM904LA, 110 kW Tier 3, Stage IIIA
Transmission	Hydrodynamic, Spicer T20 000
Axles	Dana Spicer 113 (front) Dana Spicer 123 (rear)
Tires	14.00-24 PR28
Service brakes	Hydraulic wet disc brakes
Parking and emergency brakes	SAHR type, fail safe wet disc brakes
Fuel tank	150 liters
Hydraulic jacks	TJ60 (front), TJ75 (rear)
Hand throttle	Standard
Centralized greasing points	Carrier

Options

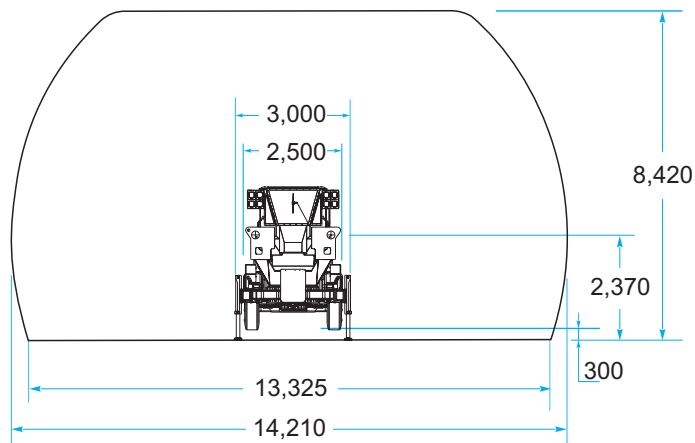
- High speed carrier. TC8, incl. MB OM906LA, 170 kW, Tier 3, Stage IIIA, with Spicer T32 000 transmission.
- High speed carrier. TC8, incl. QSB6.7, 164 kW, Tier 4i, Stage IIIB, with Spicer T32 000 transmission.
- Optional engine. QSB4.5, 119 kW, Tier 4i, Stage IIIB.
- Foam filled tires.
- Exhaust catalyzer. For Tier 3 engines.
- Rod rack under carrier. For 12 - 20 ft rods.
- Fast filling system. For fuel or complete
- Wheel chocks and holders. 2 pieces.
- LP cleaning system with reel. Max. 15 bar.
- HP cleaning system with reel. Max. 180 bar.
- Greasing unit with pump, reel and nozzle. Manual.
- Automatic greasing system. Carrier, booms and utility boom.
- Handheld fire extinguisher. 1 x 7.7 kg type ABC
- Manual fire suppression system. 8 nozzles (incl. 1 x extinguisher).
- Auto. fire suppression system. 8 nozzles (incl. 1 x extinguisher).
- Access Detector system (Spec. TS2-211).

Packages

- Regional packages. EUR package.
- Anti-freezing package: Block heater for engine, heater for hydraulic oil, Water circuit flushing with air, antifreeze adding in water circuit.

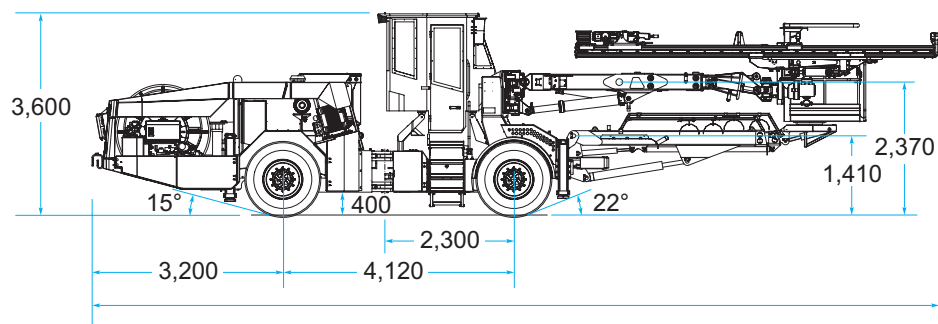
Extra items

- Ground fault and overcurrent protection (VYK).
- Spare rock drill.
- Spare wheel assembly.
- Special tools for rock drill.
- Tunnel laser set.
- Documentation. Extra manuals.

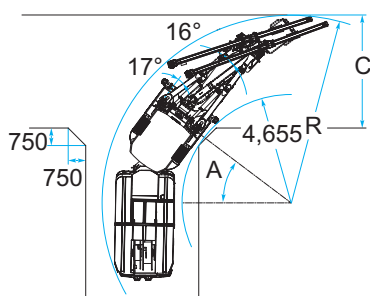


All dimensions in mm

	TF500-12'	TF500-14'	TF500-16'	TF500-18'	TF500-20'
Feed length	5,330 mm	5,940 mm	6,550 mm	7,160 mm	7,770 mm
Overall length	14,680 mm	14,900 mm	14,900 mm	15,350 mm	16,400 mm
Overall length with TRR1	14,710 mm	14,930 mm	14,930 mm	15,380 mm	16,430 mm



All dimensions in mm



	Angle (A)	Radius (R)	T-cross (C)
DT821-C (TF500-12')	mm 37°	7,940	4,730
DT821-C (TF500-14')	mm 37°	7,940	4,730
DT821-C (TF500-16')	mm 37°	8,050	4,840
DT821-C (TF500-18')	mm 37°	8,190	4,980
DT821-C (TF500-20')	mm 37°	8,300	5,090

All dimensions in mm

Sandvik Construction reserves the right to make changes to the information on this data sheet without prior notification to users. Please contact a Sandvik representative for clarification on specifications and options.

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