



# SANDVIK DT611 TUNNELING DRILLS

## TECHNICAL SPECIFICATION

Sandvik DT611 is a one 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 enables productive and high quality excavation. Sandvik RD520 rock drills deliver superior performance with high consumable life.

Sandvik SB40 universal boom has a large optimum shaped coverage and full automatic parallelism. In addition to face drilling the unit can also be used for cross-cutting and bolt hole drilling.

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



### KEY FEATURES

Hydraulic rock drill	Sandvik RD520
Drill feed	Sandvik TF500-12'
Boom	Sandvik SB40
Control system	Sandvik THC561, hydraulic
Coverage area	7,210 x 6,000 mm (39 m <sup>2</sup> )
Hole length	Up to 4,660 mm
Turning width (T-section)	4,800 mm
Transport / drilling width	2,250 mm
Transport height	3,200 mm / 2,500 mm
Transport length	11,800 mm
Total weight	20,600 kg depending on options

**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. 400 rpm (with OMS80)
Rotation torque	400 Nm (with OMS80)
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-1
Air consumption	250 - 350 l/min
Oil consumption	180 - 250 g/h

**Options**

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

**BOOM**

Boom type	Sandvik SB40
Parallel coverage	44,5 m <sup>2</sup>
Parallelism	Automatic hydraulic
Boom extension	1,050 mm
Feed extension	1,350 mm
Boom weight, net	2,100 kg
Roll-over angle	358°
Bolt hole drilling	Yes

**FEED**

TECHNICAL SPECIFICATION 3-1400

Feed type	TF500-10'	TF500-12'	TF500-14'	TF500-16'
Feed force	Max. 25 kN	Max. 25 kN	Max. 25 kN	Max. 25 kN
Total length	4,660 mm	5,270 mm	5,880 mm	6,490 mm
Hole length	2,830 mm	3,440 mm	4,050 mm	4,660 mm
Rod length	3,090 mm	3,700 mm	4,305 mm	4,915 mm
Net weight	470 kg	500 kg	530 kg	560 kg

**Options**

- Feed length 10', 14', 16'.
- Telescopic feed. Sandvik TFX6/12, TFX8/14.
- Rod retainer. SCR with TF feed (incl. safety wire).
- Rod retainer. TRR1 with TFX feed (incl. safety wire).
- Two rods system. TRS + SCR with TF feed (incl. safety wire).

**UTILITY BOOM**

TECHNICAL SPECIFICATION 3-1400

Boom type	SUB2A
Boom extension	2,000 mm
Boom weight, net	1,420 kg
Max allowed load	510 kg
Max allowed load with safety canopy	400 kg

**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.

**HYDRAULIC SYSTEM**

Powerpack	HPP555 (1 x 55 kW)
Percussion pump	100 cc (variable)
Rotation pump	33 cc (gear)
Utility boom pump	26 cc (gear)
Filtration size	20 micron (pressure) 10 micron (return)
Oil tank volume	270 liters
Tank filling	Electric pump
Oil cooler	Water cooled. Cooling capacity 30 kW

**Options**

- Manual oil filling pump instead of electric pump.
- Vacuum pump for hydraulic system.
- Biodegradable oils. Shell Naturelle HFE46 / HFE68.

**CONTROL SYSTEM**

TECHNICAL SPECIFICATION 5-1020

Type	Sandvik 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.
- TMS DDSS1 system. Spec. 5-9200.

## ELECTRIC SYSTEM

Total input power	85 kW
Main switch	MSE10
IP classification	Spec. sheet TS2-132
Standard voltage	380 - 690 VAC ( $\pm 10\%$ )
Starting method	Star-delta starter 380 - 690 VAC
Automatic cable reel	TCR3E with spooling system
Cable reel control (in and out)	Operator station
Front lights (combined working and driving)	6 x 35 W HID (24 VDC)
Rear lights (combined working and driving)	4 x 35 W HID (24 VDC)
Rear brake / park lights	2 x Red LED

### Options

- Optional voltage. 1,000 VAC, 50 Hz.
- Electric cable rubber or PUR. Spec sheet TS2-121.
- Remote control for reel(s) at rear machine.
- Extra working lights. 2 x 35 W HID (24VDC).
- Amber strobe light. Flashing (24VDC).

## FLUSHING SYSTEM

Flushing	Water
Water pump type	WBP2
Water pump capacity	65 l/min
Water pump inlet pressure	2 - 7 bar (Min.)
Flushing water pressure	10 - 15 bar
Air compressor	CTN10, 1 m <sup>3</sup> /min (7 bar)

### Options

- Flushing flow supervision.
- Air mist flushing. External air and water supply (incl. IP5 and flushing flow supervision).
- Water flushing with air cleaning of hole. External water and CTN16 compressor.
- Additional air capacity for hole cleaning with air. 1 x 60 liter air receiver (incl. IP5 air cleaner).
- External air connection. IP5 air cleaner.
- Water hose reel. THR2.5E with water hose 38 mm (1 1/2"), 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 canopy	FOPS (ISO 3449)
Operation	Seated tramming Standing drilling
Sound pressure level according to EN791	Operator station: 100 dB(A) Emitted: 125 dB(A)
Stair and service lights	LED lights

### Options

- Reduced tramming speed. 3rd gear lockout.
- Reversing camera the rear of the machine.

## CARRIER

Carrier	Sandvik NC7
Carrier type	Frame steering, Orbitrol
Frame steering	$\pm 40^\circ$
Rear oscillation	$\pm 10^\circ$
Ground clearance	320 mm
Diesel engine	MB 0M904LA, 110 kW, Tier 3, Stage IIIA
Transmission	Hydrodynamic, spicer T20 000
Axles	Dana spicer 123
Tires	12.00-20 PR28
Service brakes	Hydraulically operated wet disc brakes
Fuel tank	150 liters
Hydraulic jacks	TJ40 Vertical (front) TJ60 Vertical (rear)
Hand throttle	Standard
Centralized greasing points	Booms and carrier
Handheld fire extinguisher	1 x 7.7 kg Type ABC

### Options

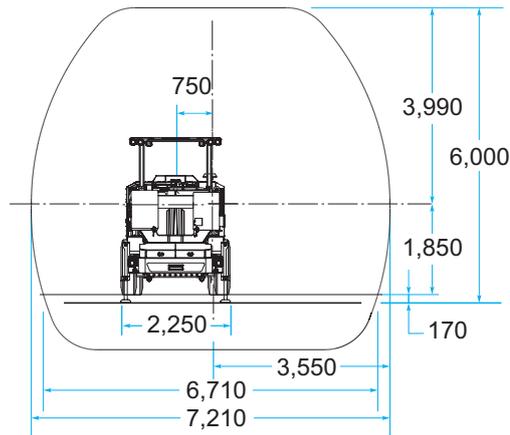
- Exhaust catalyzer. For Tier 3 diesel engine.
- Foam filled tires.
- Fast filling system. For fuel or complete.
- Rod rack on carrier side. (12 to 21 ft rods).
- Wheel chocks and holders. 2 pieces.
- LP cleaning system with reel. Max. 15 bar.
- HP cleaning system with reel. Max. 180 bar.
- Greasing unit with pump, reel and nozzle. Manual.
- Automatic greasing system. Booms and carrier.
- Manual fire suppression system. 6 nozzles (incl.1 x extinguisher).
- Auto. fire suppression system. 6 nozzles (incl.1 x extinguisher).

### Packages

- Regional packages. LAM, USC, AUS.
- Harsh water package.
- Start-up drilling tools. For 45 -51 mm holes.
- Anti-freezing package: Block heater for engine, heater for hydraulic oil, Water circuit flushing with air, antifreeze adding in water circuit.

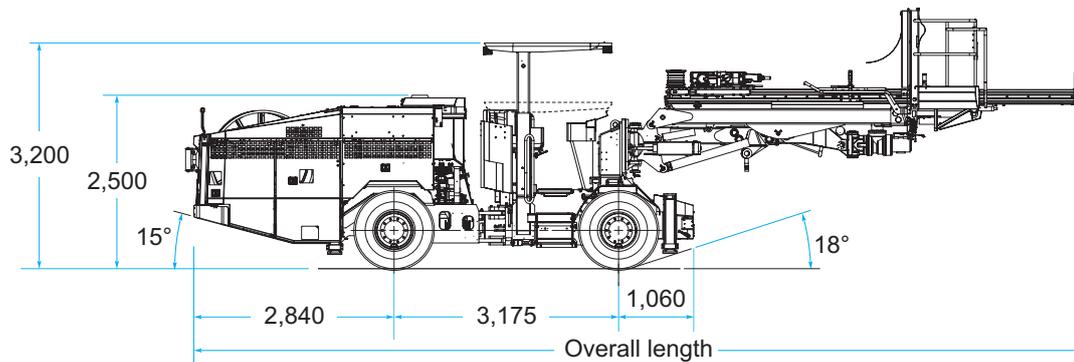
### Extra items

- Ground fault and overcurrent protection (VYK).
- Spare rock drill.
- Spare wheel assembly. Standard or foam-filled.
- Special tools for rock drill.
- Documentation. Extra manuals.

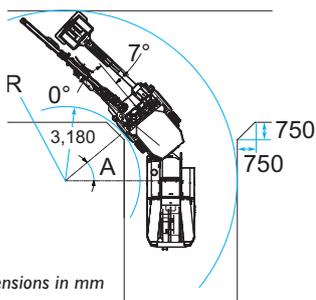


All dimensions in mm

		TF500-10'	TF500-12'	TF500-14'	TF500-16'	TFX6/12	TFX8/14
Overall length	mm	11,800	12,350	12,550	13,000	12,200	12,650
Overall length (TRR1)	mm	11,835	12,385	12,585	13,035	12,235	12,685

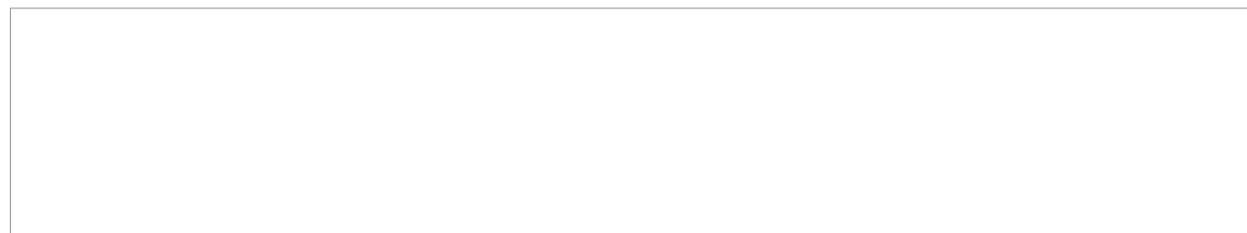


All dimensions in mm



All dimensions in mm

		Angle (A)	Radius (R)	T-cross (C)
DT611 (TF500-12')	mm	40°	7,275	4,800



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