



DT1231 TUNNELING DRILLS

TECHNICAL SPECIFICATION

Sandvik DT1231 is a three 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 level enable productive and high quality excavation.

Sandvik RD520 rock drills deliver superior performance with high consumable lifetime. Sandvik SB150 universal booms have 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.

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

KEY FEATURES

Coverage area	211 m ² (19 190 x 11 920 mm)
Hydraulic rock drill	3 x RD520, 20 kW
Drill feed	3 x TF500-18'
Booms	3 x SB150
Elevating boom support	Standard
Elevating operator station	1 000 mm
Control system	THC561, hydraulic
Hole length	Up to 6 180 mm
Turning radius	11 860 mm
Tramming / drilling width	2 950 mm / 3 860 mm (TC11) 3 050 mm / 3 860 mm (TC12)
Tramming / drilling height	3 620 mm / Max. 4 935 mm
Tramming length	18 200 mm (with TF500-18')
Total weight	42 000 kg (without utility boom) depending on options
Total weight	46 000 kg (with utility boom) depending on options



HYDRAULIC ROCK DRILL

Type of rock drill	RD520 (TS2-235)
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

FEED

Type of feed	Feed force (Max.)	Total length (mm)	Hole length (mm)	Rod length (mm)	Net weight (kg)
TF500-12'	25 kN	5 270	3 440	3 700	500
TF500-14'	25 kN	5 880	4 050	4 305	530
TF500-16'	25 kN	6 490	4 660	4 915	560
TF500-18'	25 kN	7 100	5 270	5 525	590
TF500-20'	25 kN	7 710	5 880	6 135	620
TF500-21'	25 kN	8 015	6 185	6 440	640

BOOM

Type of boom	SB150 (TS2-267)
Parallel coverage	159 m ²
Parallelism	Hydraulic
Boom extension	3 200 mm
Feed extension	1 650 mm
Boom weight, net	3 300 kg
Roll-over angle	358°

UTILITY BOOM (OPTIONAL)

Type of utility boom	SUB5A (TS2-308)
Boom extension	2 x 3 000 mm
Boom weight, net	2 675 kg
Max allowed load	510 kg
Max allowed load with safety canopy	400 kg

HYDRAULIC SYSTEM

Operating principle	Hydraulic control
Powerpack	HPP555 (3 x 55 kW)
Filtration size (pressure / return)	20µ / 10µ
Oil tank volume	470 liters
Oil tank filling pump	Electric pump
Oil cooler (water actuated)	1 x OW30 (30 kW)

DRILLING CONTROL SYSTEM

Type of control system	THC561 (TS2-362)
Manual boom control	Direct control Fully proportional Hydraulic parallelism
Drilling control	Feed / percussion control
Automatic cycle	Stop and return automatics

ELECTRIC SYSTEM

Total installed power	200 kW
Standard voltage	380 - 690 VAC (± 10%)
Main switch gear	MSE3
IP classification	Specification TS2-132
Starting method	Star-delta starter 380 - 690 VAC
Automatic cable reel	TCR6EHD
Cable reel control	Operator station
Front lights (combined working and driving)	12 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

AIR AND WATER SYSTEM

Flushing of holes	By Water
Water booster pump type	WBP3
Water pump capacity	215 l/min
Water pump inlet pressure	2 - 7 bar (Min.)
Flushing water pressure	10 - 15 bar
Shank lubrication device	SLU-3 (air / oil mist)
Air compressor	CTN10, 1 m ³ /min (7 bar)
Oil consumption	180 - 250 g/h
Air consumption	250 - 350 l/min

OPERATOR'S SAFETY CANOPY

Safety canopy certification	FOPS (ISO 3449)
Elevating operator station	1 000 mm
Operation	Seated tramming Standing drilling
Sound pressure level according to EN 16228	Operator station: 103 dB(A) Emitted: 128 dB(A)
Stair and service lights	LED lights

*OPERATOR'S SAFETY CABIN (OPTIONAL)

Safety cabin certification	FOPS (ISO 3449)
Elevating operator station	1 000 mm
Operation	Seated tramming Standing drilling
Sound pressure level according to EN 16228	Operator station: 80 dB(A) Emitted: 128 dB(A)
Floor	Water-washable
Air conditioning	EU6/7 filtering capacity
Cabin heating	During tramming and drilling
Electricity outlets	1 x 12 V
Stair and indoors lights	LED lights

2. SANDVIK DT1231 - TUNNELING DRILLS

CARRIER

Carrier type	TC11
Steering system	Axle steering in engine end Orbitrol
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 37R (front) Dana Spicer 213 (rear)
Tires	14.00-24 28RL
Service brakes	Hydraulically operated wet disc brakes
Parking and emergency brakes	SAHR type, fail safe wet disc brakes
Tramming speed	15 km/h (Horizontal) 3.5 km/h (14%=1:7=8°)
Gradeability / inclination	Max. 15° / 5°
Fuel tank	150 liters
Hydraulic jacks	TJ60 (front), TJ75 (rear)
Hand throttle	Standard
Centralized greasing points	Carrier
Fire extinguisher	1 x 7.7 kg Type ABC
Tramming alarm	Standard
Knowledge Box™	Connectivity solution (TS2-535)
Colour scheme	Sandvik standard
Documentation	1 x Operator's manual 1 x Maintenance manual 1 x Technical manual (in English only) 1 x Parts manual (in English only) 2 x Toolman USB key

OPTIONAL FEATURES AND PACKAGES**Rock drill**

*Rock drill type	RDX5 (with 55 kW HPP) RD525 (with 75 kW HPP)
Power extractor	for RD520 or RDX5

Feed

*Feed length	12', 14', 16', 20', 21'
*Telescopic feed	TFX6/12, TFX8/14, TFX10/16
Rod retainer	SCR with TF feed (incl. safety wire) TRR1 with TFX feed (incl. safety wire)
Two rods system	TRS (incl. SCR for 10-12 ft extension rods)
Start-up drilling tools	For 45 -51 mm holes
Casing drilling set	For 90 mm (3 ½") or 115 mm (4 ½") pipe

Utility boom (option)

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

*Oil tank filling pump	Manual
*Oil cooler (air actuated)	1 x OA30 (30 kW)
Vacuum pump	For hydraulic system
*Biodegradable oils	Sandvik oils

Drilling control system

*Constant speed drilling instrumentation	Replaces feed / percussion control TMS DDSS3 system (Spec. 5-9200) TCAD+ with iSURE I Basic (Drill plan design)"
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OPTIONAL FEATURES AND PACKAGES**Electric system**

*Optional voltage	1 000 VAC, 50 Hz.
*Electric cable	Specification TS2-121
Ground fault and overcurrent protection	VYK
Spooling device	For cable reel
Remote control for reel(s)	At rear machine
Electricity outlet in front carrier	1 x 400 VAC or 1 x Main voltage
Amber flashing light	LED (24 V)

Air and water system

Flushing flow supervision	Option
Air mist flushing	External air/water supply (incl. IP5 air cleaner) CT28 air compressor Additional 2 x 80 l air receivers IP5 air cleaner
*Hole cleaning with air	THR5E incl. water hose 44.5 mm (1 ¾"), 60 m
External air connection	
Water hose reel	

Cleaning system

LP system with reel	Up to 15 bar (TS2-343)
HP system with reel	Up to 180 bar (TS2-343)

Greasing systems

Manual system	Specification TS2-463
Automatic system	Carrier, booms and basket boom

Operator's safety canopy

Safety cabin	FOPS (ISO3449)
Tramming camera	Rear and side

Fire suppression system

Manual or automatic system	Ansul, 8 nozzles (TS2-460) (incl. 1 x fire extinguisher)
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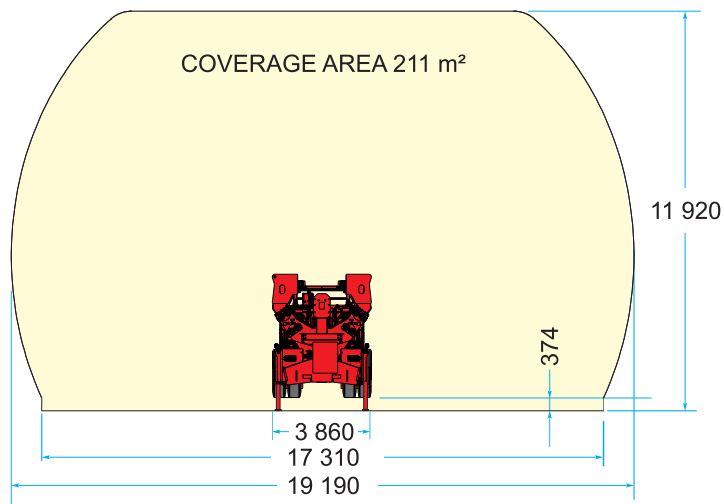
Carrier

High speed carrier	TC12, incl.MB OM906LA, 170 kW, Tier 3, Stage IIIA, with Spicer T32 000 transmission and front axle 43R. TC12, incl.QSB6.7, 164 kW, Tier 4i, Stage IIIB, with Spicer T32 000 transmission and front axle 43R.
Exhaust catalyzer	For Tier 3 engines
Reduced tramming speed	3rd gear lockout
Rod rack under carrier	For 12 - 21 ft rods

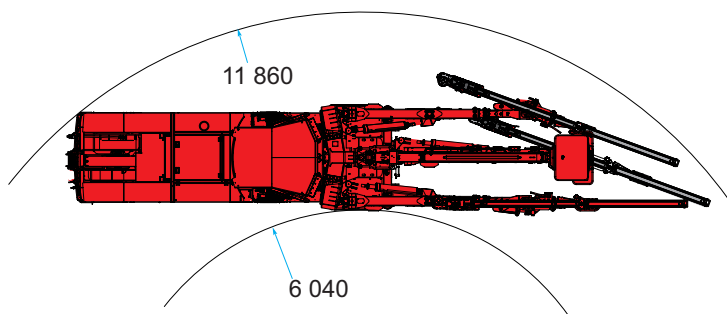
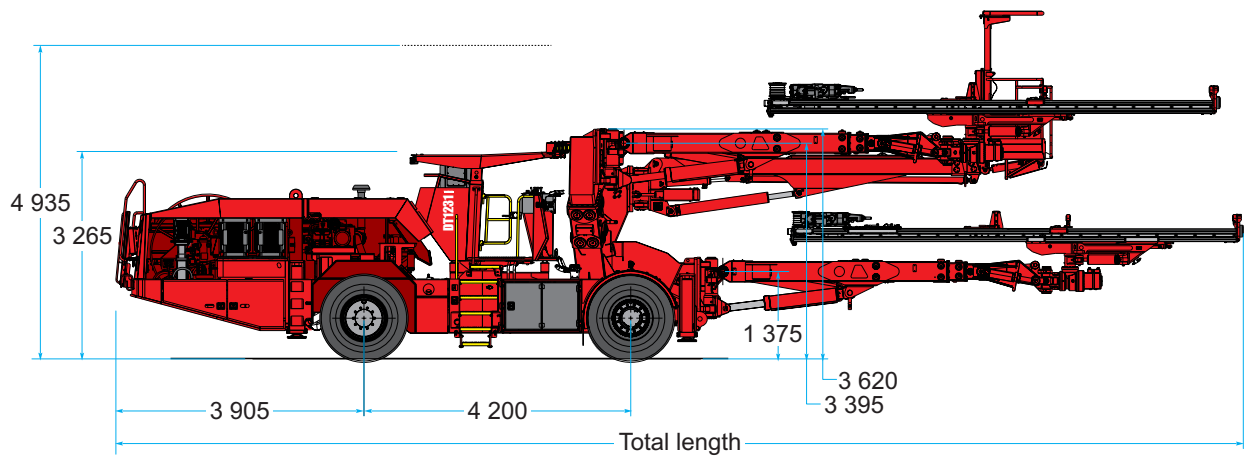
Extra items

Spare rock drill	RD520, RD525 or RDX5
Spare wheel assembly	14.00-24 28RL
Special tools for rock drill	Field tool set Complete tool set
Tunnel laser set	
Documentation	Extra paper, Catbase, Link one manuals
iSURE®	iSURE II Plus annual license (Advanced drill and blast design including round reports) iSURE III Premium annual license (MWD including Pull out analyses)
Anti-freezing	Block heater for engine, heater for hydraulic oil, water circuit flushing with air, antifreeze adding in water circuit.

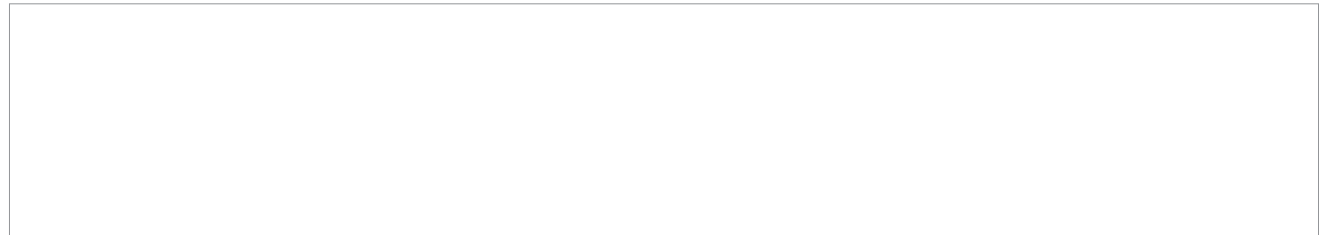
**) Replaces standard feature*



	TF500-14'	TF500-16'	TF500-18'	TF500-20'	TF500-21'
Feed length	5 940 mm	6 550 mm	7 160 mm	7 770 mm	8 075 mm
Total length	17 160 mm	17 760 mm	18 200 mm	19 160 mm	18 610 mm



All dimensions in mm



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4. SANDVIK DT1231 - TUNNELING DRILLS