

DT1131-C TUNNELING DRILL

TECHNICAL SPECIFICATION

Sandvik DT1131-C is a 3-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 life. 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 wheel steered carrier ensures rapid and safe tramming with good balance.

KEY FEATURES

Coverage area	183 m ² (18 210 x 10 920 mm)
Hydraulic rock drill	1 x RD520, 20 kW
Drill feed	1 x TF500-18'
Boom	1 x SB150
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	4 140 mm / 4 140 mm (TC11) 4 230 mm / 4 230 mm (TC12)
Tramming length	17 780 mm (with TF500-18')
Total weight	40 000 kg (without utility boom) depending on options
Total weight	44 000 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

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°

FEED

Feed type	Feed force (Max.)	Total length (mm)	Hole length (mm)	Rod length (mm)	Net weight (kg)
TF500-12'	25 kN	5 330	3 440	3 700	500
TF500-14'	25 kN	5 940	4 050	4 305	530
TF500-16'	25 kN	6 550	4 660	4 915	560
TF500-18'	25 kN	7 160	5 270	5 525	590
TF500-20'	25 kN	7 770	5 880	6 135	620
TF500-21'	25 kN	8 075	6 180	6 440	640

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

Powerpack	HPP555 (3 x 55 kW)
Percussion pump	110 cc (variable)
Rotation pump	60 cc (variable)
HVAC pump (Heating, Ventilation and A/C)	26 cc (gear)
Filtration size (pressure / return)	20 µ / 10 µ
Oil tank volume	470 liters
Tank filling	Electric pump
Cooler for hydraulic oil	OW30 oil-to-water (2 x 30 kW)

CONTROL SYSTEM

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

ELECTRIC SYSTEM

Standard voltage	380 - 690 V (± 10%)
Total input power	200 kW
Main switch	MSE3
IP classification	Specification TS2-132
Starting method	Star-delta starter 380 - 690 V
Automatic cable reel	TCR6EHD
Cable reel control (in / out)	Operator station
Front lights (combined working and driving)	12 x 50 W LED (24V)
Rear lights (combined working and driving)	4 x 50 W LED (24 V)
Rear brake / park lights	2 x Red LED

AIR AND WATER SYSTEM

Flushing of holes	By water
Water 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 CABIN

Safety cabin	FOPS (ISO 3449)
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
Stairs and indoors lights	LED lights

CARRIER

Type of carrier	TC11
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) / 213 (rear)
Tires	14.00-24 28RL
Service brakes	Hydraulically operated wet disc brakes
Parking / emergency brakes	SAHR type, fail safe wet disc brakes
Fuel tank	150 liters
Tramming speed	15 km/h (Horizontal) 3.5 km/h (14%=1:7=8°)
Gradeability / sideways tilt	Max. 15° / 5°
Carrier stabilization	TJ60 (front), TJ75 (rear)
Hand throttle	Standard
Centralized greasing points	Carrier
Handheld 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 ITEMS**Rock drill**

*Type of rock drill	RDX5 (with 55 kW HPP) RD525 (with 75 kW HPP) For RD520 or RDX5
Power extractor	

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 1/2") or 115 mm (4 1/2") pipes

Utility boom

Safety canopy	FOPS approved Sliding FOPS safety canopy
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	Sandvik oils
Cooler for hydraulic oil	OA30 oil-to-air (2 x 30 kW)
Vacuum pump	For hydraulic oil

Control system

Constant speed drilling	Replaces feed / percussion control
Access detector system	Mandatory in Europe (TS2-211)
Drilling instrument	TCAD+ with iSURE I Basic (Drill plan design) TMS DDSS3 for TF feed
Additional display	Additional display for TCAD+ (2 pcs)

Cleaning system

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

OPTIONAL ITEMS**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)
Electric cables	Specification TS2-121
Spooling device for cable reel	For voltages 690 - 1 000 V
Ground fault and overcurrent unit	VYK
Electricity outlet in front carrier	1 x 400 V or 1 x Main voltage
Remote control for reel(s)	At rear machine
Amber flashing light	LED (24 V)

Air and water system

Flushing flow supervision	
*Air compressor	CT28 (2.8 m³/min at 7 bar)
Air mist flushing	External air / water supply (incl. IP5 air cleaner)
Additional air capacity	CT28 compressor, 2 x 80 liters receiver (incl. IP5 air cleaner).
External air connection	IP5 air cleaner
Water hose reel	THR5E with water hose 45 mm (1 3/4"), 60 m

Operator's safety cabin

Reduced tramming speed	3rd gear lockout
------------------------	------------------

Fire suppression system

Additional fire extinguisher	7.7 kg (type ABC)
Manual system	Ansul, 8 nozzles (TS2-460)
Automatic system	Ansul, 8 nozzles (TS2-460)

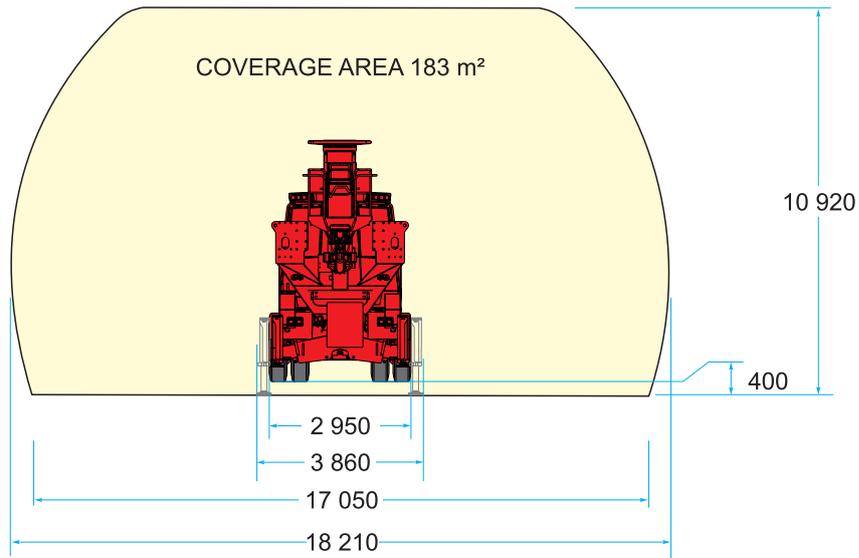
Carrier

*High speed carrier	TC12, incl. MB OM906LA, 170 kW, Tier 3, Stage IIIA, with Spicer T32 000 transmission
*High speed carrier	TC12, incl. QSB6.7, 164 kW, Tier 4i, Stage IIIB, with Spicer T32 000 transmission and front axles 43R.
Exhaust catalyzer	For Tier 3 engines
*Tires	Foam filled tires
Fast filling system	For fuel or complete
Rod rack on carrier side	12 to 21 ft rods
Tramming camera	Rear and side
Wheel chocks and holders	2 pieces

Extra items

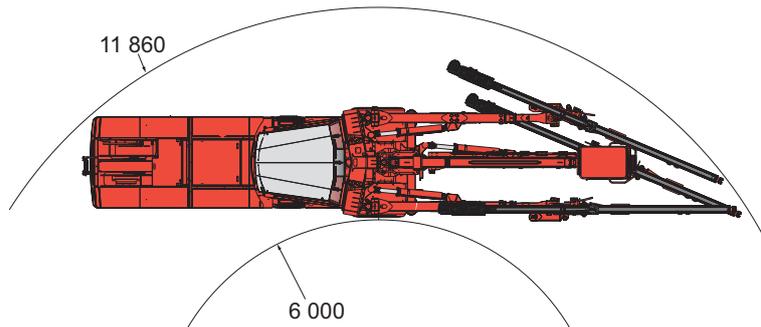
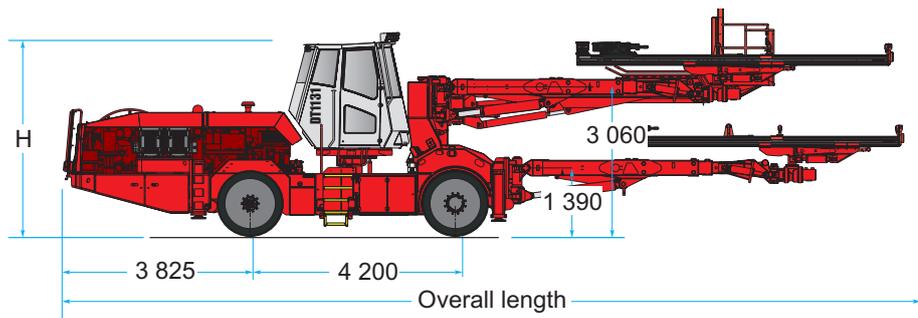
Spare rock drill	RD520, RD525 or RDX5
Spare wheel assembly	Standard or foam filled tires
Special tools for rock drill	Field tool set Complete tool set
Tunnel laser set	
Documentation	Extra manuals
Extended warranty	One year additional
iSURE®	iSURE II Plus annual license (Advanced drill and blast design including round reports) iSURE III Premium annual license (MWD including Pull out analyses)
Package: Country specific options	EUR package
Package: Anti-freezing	Block heater for engine, heater for hydraulic oil, water circuit flushing with air, antifreeze adding in water circuit.

**) Replaces standard feature*



	TF500-12'	TF500-14'	TF500-16'	TF500-18'	TF500-20'	TF500-21'
Feed length	5 330 mm	5 940 mm	6 550 mm	7 160 mm	7 770 mm	8 075 mm
Overall length	15 850 mm	16 740 mm	17 340 mm	17 780 mm	18 540 mm	18 740 mm

H	Height (H)
TC11 carrier	4 140 mm
TC12 carrier	4 230 mm



All dimensions in mm



Sandvik Mining and Rock Solutions 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.