



DT1231i TUNNELING DRILL

TECHNICAL SPECIFICATION

Sandvik DT1231i is a computer-controlled three boom electro-hydraulic jumbo for fast and accurate drilling in tunneling and cavern excavations.

The drill rig has automatic drilling functions and boom positioning under supervision of the operator of the drill rig. Automated drilling of pre-planned drilling pattern combined with extensive data collection and reporting system enables continuous control of productivity, quality and economy. In addition to face drilling the unit can also be used for cross-cutting and bolt hole drilling.

Noise and vibration insulated cabin provides ergonomic and extremely comfortable working place with excellent visibility during tramming and drilling.

KEY FEATURES

Coverage area	211 m ² (19 190 x 11 920 mm)
Hydraulic rock drill	3 x RD525 (25 kW)
Drill feed	3 x TF5i-18'
Boom	3 x SB150i
Boom elevating support	Standard
Control system	iDATA
Hole size (drifting)	43 - 64 mm
Hole length	Up to 6 180 mm
Turning radius	11 860 mm
Tramming / drilling width	3 050 mm / 3 860 mm
Tramming / drilling height	3 670 mm / 4 670 mm
Tramming length	17 780 mm (with TF500-18')
Total weight	45 500 kg (without utility boom) depending on options
Total weight	49 500 kg (with utility boom) depending on options



HYDRAULIC ROCK DRILL

Type of rock drill	RD525 (TS2-236)
Percussion power	25 kW
Percussion pressure	Max. 235 bar
Percussion rate	93 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)
TF5i-12'	25 kN	5 330	3 440	3 700	500
TF5i-14'	25 kN	5 940	4 050	4 305	530
TF5i-16'	25 kN	6 550	4 660	4 915	560
TF5i-18'	25 kN	7 160	5 270	5 525	590
TF5i-20'	25 kN	7 770	5 880	6 135	620
TF5i-21'	25 kN	8 075	6 180	6 440	640

BOOM

Type of boom	SB150i (TS2-267)
Parallel coverage	159 m ²
Parallelism	Automatic electric
Boom extension	3 200 mm
Feed extension	1 650 mm
Boom weight, net	3 350 kg
Roll-over angle	358°

UTILITY BOOM (OPTIONAL)

Type of utility boom	SUB5i A/B (TS2-311)
Boom extension	2 x 3 000 mm
Boom weight, net	2 635 / 2 895 kg
Basket swing	± 45° in B - model
Max. allowed load	510 kg
Max. allowed load with safety canopy	400 kg

HYDRAULIC SYSTEM

Powerpack	HPP580 (3 x 80 kW)
Percussion pump	140 cc (variable)
Rotation pump	85 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
Filling pump for hydraulic oil	Electric
Cooler for hydraulic oil	OW55 oil-to-water (3 x 55 kW)

CONTROL SYSTEM

Type of control system	iDATA automation system (incl. iSURE I tunnel office program)
Manual boom control	Direct control Electric parallelism Manipulator mode
Automatic boom positioning	Automatic boom positioning Lock to target Automatic correct function Boom self collision detection
Drilling control	Feed / percussion control Feed / percussion manual control Torque control
Automatic cycle	One hole automatics Automatic hole length control Automatic round drilling according to pre-designed plan

ELECTRIC SYSTEM

Standard voltage	380 - 690 V (± 10%)
Total input power	270 kW
Main switch	MSE3i
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 (24 V)
Stair and service lights	LED (24V)

AIR AND WATER SYSTEM

Flushing of holes	By water
Water booster pump type	WBP4 HP
Water pump capacity	400 l/min
Water pump inlet pressure	2 - 7 bar (Min.)
Flushing water pressure	15 - 20 bar
Shank lubrication device	SLU-3 (air / oil mist)
Air compressor	CT28 (2.8 m ³ /min at 7 bar)
Oil consumption	180 - 250 g/h
Air consumption	250 - 350 l/min

OPERATOR'S SAFETY CABIN

Safety cabin	FOPS (ISO 3449)
Type of cabin	Standard height
Cabin height	3 780 mm
Cabin inside height	2 000 mm
Cabin elevation	1 000 mm
Sound pressure level EN791	Cabin < 80 dB(A) Emitted 128 dB(A)
Operation	Seated for one operator
Floor	Water-washable
Air conditioning	During tramming and drilling
Cabin heating	During tramming and drilling
Electricity outlets	1 x 12 V and 1x 240 V (16A)

CARRIER

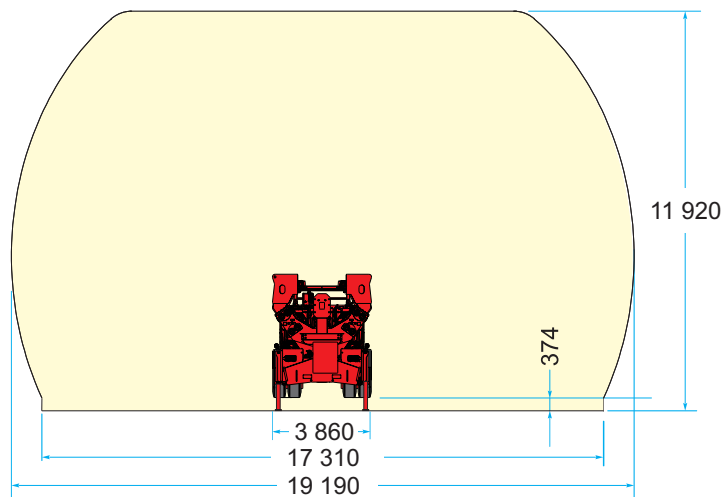
Type of carrier	TC12
Rear axle oscillation	± 8°
Ground clearance	400 mm
Diesel engine	MB OM906LA, 170 kW, Tier 3, Stage IIIA
Transmission	Hydrodynamic, Spicer HR32 000
Axles	Dana Spicer 43R (front) / 213 (rear)
Tires	14.00-24 28RL
Service brakes	Hydraulically operated wet disc brakes
Parking / emergency brakes	SAHR type, fail safe wet disc brakes
Fuel tank	150 liters
Tramming speed	15 km/h (Horizontal) 4.5 km/h (14%=1:7=8°)
Gradeability / sideways tilt	Max. 15° / 5°
Carrier stabilization	TJ60 (front), TJ75 (rear)
Hand throttle	Standard
Handheld fire extinguisher	1 x 7.7 kg Type ABC
Carrier centralized greasing	Specification 5-2110
Manual greasing system	Greasing unit with pump, reel and nozzle
Tramming alarm	Standard
Colour scheme	Sandvik standard
Documentation	2 x Operator's manual 2 x Maintenance manual 2 x Technical manual (in English only) 2 x Parts manual (in English only) 1 x Toolman CD

OPTIONAL FEATURES AND PACKAGES

Rock drill	
*Type of rock drill	Sandvik RD520 instead of RD525
Power extractor	For RD525
Feed	
*Feed length	12', 14', 16', 20', 21'
Rod retainer	SCR with TF feed (incl. safety wire)
Two rods system	TRS (incl. SCR for 10-12 ft extension rods)
Rod handling system	TRH (incl. SCR + power extractor for 12 - 16 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") pipes
Utility boom option	
Safety canopy for utility boom	FOPS approved
Spot lights for utility boom	Sliding canopy
Remote joystick	2 x 17 W LED
Rod racks for utility boom	Controlled spot lights
RX expansion bolt kit	For 4 pcs of 10 or 12 ft rods
	D30 mm or D41 mm
Hydraulic system	
*Powerpack	HPP555 (3 x 55 kW) with RD520
*Filling pump for hydraulic oil	Manual
*Cooler for hydraulic oil	OA30 oil-to-air (3 x 30 kW)
By pass oil filter	
*Biodegradable oils	Shell Naturelle HFE46/68
Vacuum pump	For hydraulic system
Control system	
Access protector system	
User interface	Mandatory in Europe (TS2-211)
iPROF automation system	2nd operator (standing)
iSURE II report	
iSURE III analysis	Drill steel consumption monitoring
iSURE IV bolt plan	MWD analysis
	Design and data collection analysis

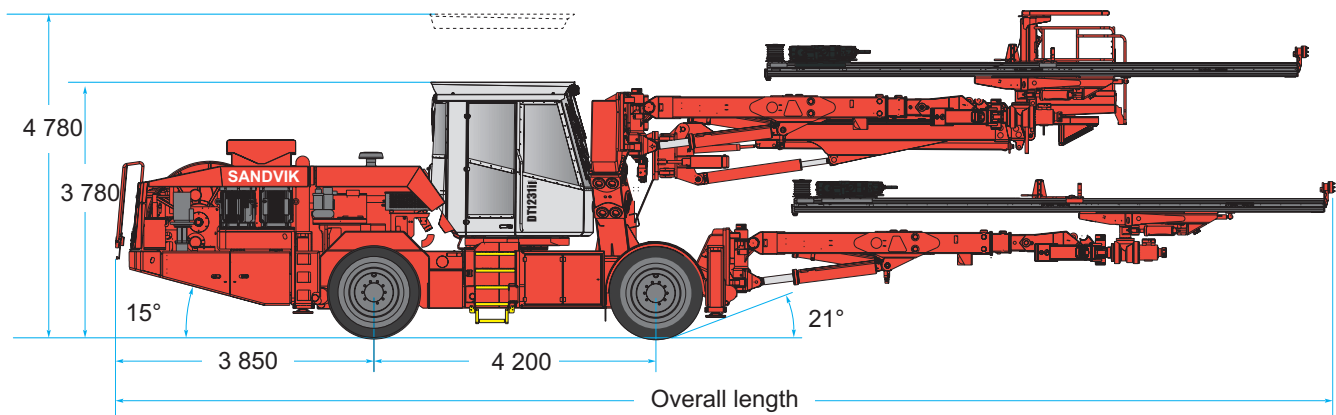
OPTIONAL FEATURES AND PACKAGES

Control system (continue)	
Online MWD	Required WLAN package
Calibration and accuracy measurement set	Excl. total station
Total station navigation set	Excl. total station.
Remote monitoring and data transfer	With WLAN
Measurement adapter kit	Cables and connectors for spare parts programming and maintenance measurements
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)
Electric system	
*Optional voltage	1 000 V, 50 Hz
Spooling device	For cable reel
Ground fault and overcurrent protection	VYK
*Electric cables	Specification TS2-121
Electricity outlet in front carrier	1 x 400 V + 2 x 230 V
Remote control for reel(s)	At rear machine
Amber flashing light	LED (24V)
Air and water system	
Flushing flow supervision	
Air mist flushing kit	External air/water supply (incl. IP5 air cleaner)
Additional air capacity for hole cleaning with air	CT28 compressor, 2 x 80 liters receiver (incl. IP5 air cleaner)
External air connection	IP5 air cleaner
Water hose reel	THR5E incl. water hose 45 mm (1 ¾"), 60 m
Water hose with hooks	45 mm (1 ¾"), 60 m
Operator's safety cabin	
Reduced tramming speed	3rd gear lockout
Electricity outlets	1 x 12 V and CD player readiness
Boot washer	At cabin entrance
Audio player	CD / MP3-player, radio and loudspeakers
Fire suppression system	
Manual system	Ansul (8 nozzles)
Automatic system	Ansul (8 nozzles)
Carrier	
*Diesel engine	QSB6.7, 164 kW, Tier 4i, Stage IIIB
Exhaust catalyzer	For Tier 3 engines
Power supply	for MiniSSE
Rod rack under carrier	For 12 - 21 ft rods
Tramming cameras	Rear and side
Wheel chocks and holders	2 pieces
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	
Spare rock drill	RD525 or RD520
Spare wheel assembly	
Special tools for rock drill	
Tunnel laser set	
Documentation	Extra manuals
*) replaces standard feature	

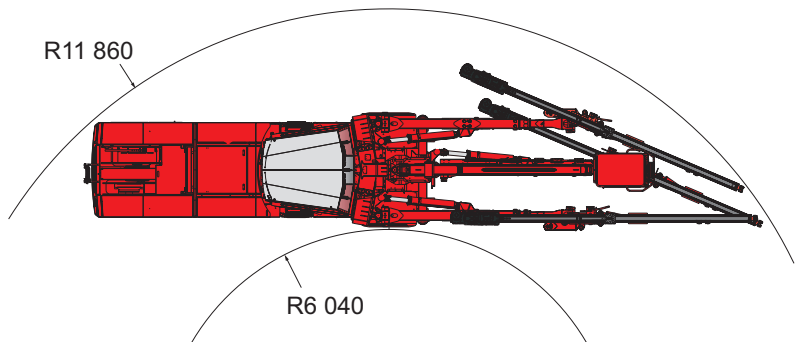


All dimensions in mm

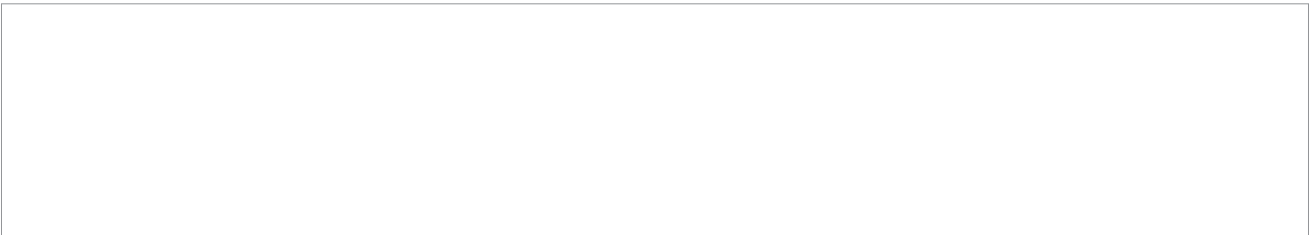
	TF500-12'	TF500-14'	TF500-16'	TF500-18'	TF500-20'	TF500-21'
Feed length	5 330 mm	5 940 mm	6 550 mm	7 160 mm	7 770 mm	8 075 mm
Overall length	15 850 mm	16 740 mm	17 340 mm	17 780 mm	18 540 mm	18 740 mm



All dimensions in mm



All dimensions in mm



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