

Sandvik DT831-SC

Underground Drill Rig



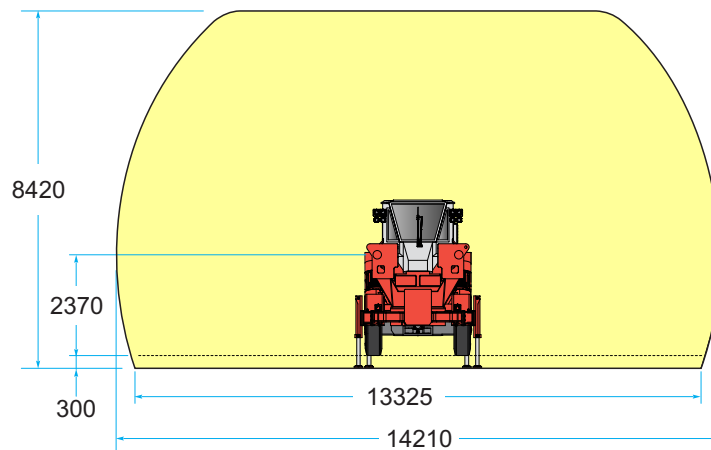
The Sandvik DT831-SC is a three boom electro hydraulic jumbo for fast and accurate drilling in tunneling and cavern excavation. The electronic controlled drilling system with added automatic functions and optional instrumentation enable productive and high quality excavation.

The RD525 rock drills deliver superior performance with high consumable life. The SB 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.

Coverage	110m ²
Boom	2 x SB90, 1 x SB60
Feed	TF500, 16ft
Rock drill	RD525
Hole diameter	45 - 64 mm
Hole length	Up to 6 180 mm
Control system	TPC 561
Cornering	4 730 mm
Length (with default feed)	14 930 mm
Width (drilling)	3 000 mm
Width (tramming)	3 000 mm
Width (transportation)	2 500 mm
Height	3 600 mm
Weight	34 000 kg (depending on options)

Coverage area



All dimensions in mm

Hydraulic rock drill

Technical Specification 2-1952

Rock drill	RD525
*Optional rock drill	RD520 with 55 kW power pack HLX5 with 55 kW power pack
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)	45 - 64 mm
Hole size (cut hole)	76 - 127 mm
Recommended rod	T38 - H35 - R32 T38 - R39 - R35
Shank adapter	T38
Weight	225 kg
Length	1 010 mm
Profile height	90 mm
Shank lubrication device	Air/oil mist, SLU
Shank lubrication compressor	CTN10, 1m ³ /min (7 bar)
Air consumption	250 - 350 l/min
Oil consumption	180 - 250 g/h
#Power extractor	PE-45

Boom

Technical Specification 4-3105

Boom	SB60
Parallel coverage	54 m ²
Parallelism	Automatic hydraulic
Boom extension	1200 mm
Boom weight, net	2250 kg
Roll-over angle	358°

Boom

Technical Specification 4-3205

Boom	SB90
Parallel coverage	90 m ²
Parallelism	Automatic hydraulic
Boom extension	1 800 mm
Boom weight, net	2 650 kg
Roll-over angle	358°

Feed

Technical Specification 3-1400

Feed	TF500-16
Feed force	Max. 25 kN
Feed extension	1 650 mm
*TF feed lengths	12', 14', 16', 18', 20'
*Telescopic feed	TFX6/12, 8/14, 10/16

Feed TF500	Total length (mm)	Hole length (mm)	Rod length (mm)	Net weight (kg)
12'	5 270	3 440	3 700	500
14'	5 880	4 050	4 305	530
16'	6 490	4 660	4 915	560
18'	7 100	5 270	5 525	590
20'	7 710	5 880	6 135	620

*Drilling options

#Rod retainer	TRR1 or SCR (with TFX only TRR1)
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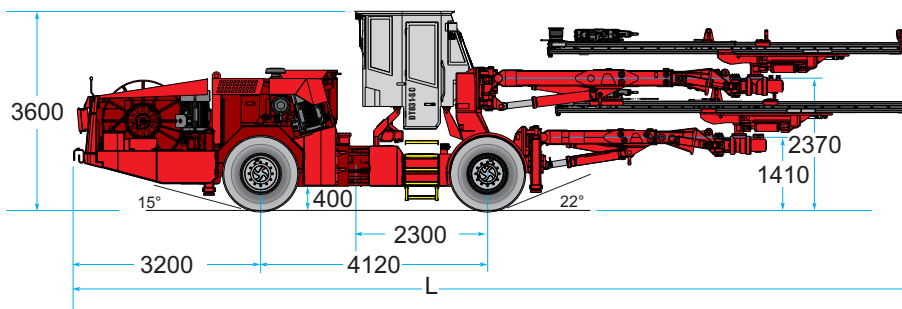
*Instrumentation option

#Angle, position and depth measurement with data logging	TCAD+ incl. iSure I & II
#MWD analysis	iSURE III Analysis office software (only with TCAD+)

Additional options features/components

* Alternative options features/components

Machine Dimensions



Feed	L	L with TRR1
TF500-12	14400	14430
TF500-14	14620	14650
TF500-16	15060	15090
TF500-18	15070	15100
TF500-20	16110	16140

All dimensions in mm

Hydraulic system

Powerpack	HPP575 (75kW)
Percussion, feed and boom pump	110cc (variable)
Rotation pump	60cc (variable)
Filtration size	20 micron (pressure) 10 micron (return)
Oil tank volume	290 liters
Tank filling	Electric pump
*Tank filling	Manual pump
Oil cooler	Water cooled. Cooling capacity 30kW
*Biodegradable oils	Shell Naturelle HFE46/69
#Vacuum pump for hydr. oil	Option

Control Panel

Technical Specification 5-1110

Type	TPC561, Electric control system
Control panel	TPC563-M (multi-operators)
*Control panel	TPC563-S (single operator, includes operator's seat)
Manual boom control	Direct control Fully proportional Hydraulic parallelism
Drilling control	Feed/percussion control Feed/percussion manual control
Automatic cycle	One hole automatics

Cleaning system

#Pressure cleaning system with reel	5-15 bar
#High pressure cleaning system with reel	Max. 180 bar

Greasing systems and options

Centralized greasing points	Carrier
#Greasing unit with pump, reel and nozzle	Manual
#Automatic greasing system	Carrier and booms

Electric system and *options

Total input power	255 kW
Main switch	MSE30
Standard voltage	380-690VAC, 50/60Hz
*Optional voltage	1000VAC, 50Hz
Voltage fluctuation	10%
Star delta starter	380VAC - 690VAC
Automatic cable reel	TCR5E
Cable reel control (in & out)	Operator station
Electric cable rubber or PUR	Depending on voltage (see spec sheet TS2-121)
Remote control for reel(s)	Machine rear
#Ground fault and overcurrent protection	VYK
#Electricity outlet in front carrier	1x400VAC or 1xMainvoltage. Define submersible pump power in order!

Flushing system and *options

Flushing	Water
Water pump type	WBP3HP
Water pump capacity	375 l/min (15bar)
Water pump inlet pressure	2-7 bar (while drilling)
#Air cleaning of hole in addition to water flushing	CT28 air compressor
#Additional air capacity for hole cleaning with air	2 x 80l air receiver (incl. IP5 air cleaner)
#External air connection	IP5 air cleaner
#Flushing flow supervision	Option
#Water hose reel	THR5E including water hose 44mm (1¾") 60m
#Air mist flushing	External air supply, (incl. IP5 air cleaner and flushing flow supervision)

Fire suppression system and *options

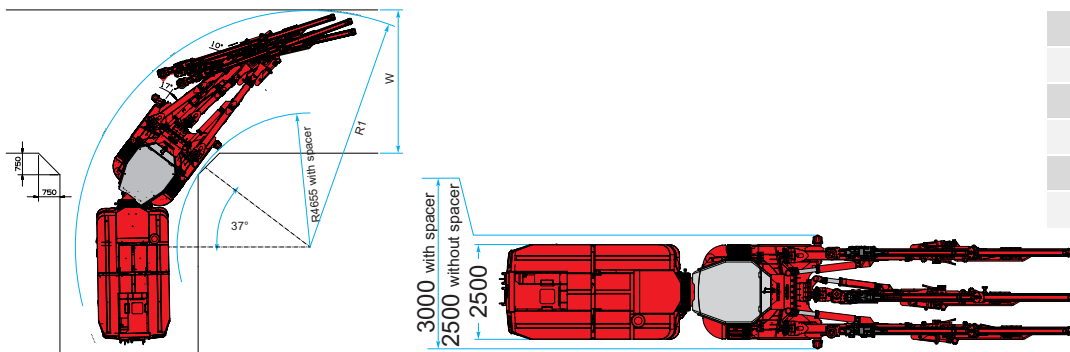
Tech. Spec. 5-9800

#Hand held fire extinguisher	On the operator station
#Manual fire suppression system	6 nozzles
#Automatic fire suppression system	6 nozzles

* Alternative options features/components

Additional options features/components

Tramming dimensions



Feed	R1	W
TF500-12	7940	4730
TF500-14	7940	4730
TF500-16	8050	4840
TF500-18	8190	4980
TF500-20	8300	5090

All dimensions in mm

Tramming

Tramming speed	Horizontal: 16 km/h 14% = 1:7 = 8° 5,4 km/h
Gradeability / Inclination	Max. 15° / 5°
#Reduced tramming speed	3rd gear lockout

Operator station

Safety cabin	FOPS (ISO 3449)
*Stainless steel cabin	FOPS (ISO 3449)
*Low mounted cabin	Height 3190mm
Operation	Standing drilling Seated tramming
Sound pressure level according to EN791	Operator station: 79 dB(A) Emitted: 125 dB(A)
Type interior lights	LED
Floor	Water-washable
Air conditioning	Filtering capacity EU 6/7
Cabin heating	During tramming and drilling
Electric outlets	12VAC
#Reversing camera	On machine rear and side
#Boot washer	At cabin entrance
#Audio system	CD player/radio/MP3

Lights and *options

Front lights (combined working and driving)	8 x 35W HID (24V)
Rear working lights	2 x 35W HID (24V)
Rear driving lights	2 x 35W HID (24V)
Rear brake/park lights	2 x Red LED
Stair and service lights	LED
#Extra working lights	2 x 35W HID (24V)
#Remote joystick controlled	2 x Spot light
#Amber strobe light	Flashing (24V)

*Packages

#Antifreezing	Block heater for engine Hydraulic oil tank heater Water circuit flushing
#Regional package	EU, others on request
#TRS Rod handling system	TRS for 10-12ft extension rods - including SCR retainer - only with TF feeds
#Start-up drilling tools	For 45 -51 mm holes
#Casing drilling set	For 90mm (3½"); 115mm (4½") pipes

Carrier

Carrier	TC8
*Optional carrier	High speed carrier TC8 Incl.MB OM906LA, 170kW, Tier 3 Spicer T32000 Transmission
*Optional carrier	High speed carrier TC8 Incl.Cummins QSB6.7, 170kW, Tier 4i, Spicer T32000 Transmission
Carrier type	Frame steering, Orbitol
Frame steering	± 37°
Rear oscillation	± 8°
Ground clearance	400 mm
Diesel engine	MB OM904LA, 110kW, Tier 3
*Optional engine	Cummins QSB4.5, 110kW, Tier4i, incl. Exhaust catalyzer
Transmission	Hydrodynamic, Spicer T20000
Axles	Spicer 113 (front) Spicer 123 (rear)
Tyres	14.00-24 PR28
*Optional tyres	Foam filled tyres
Service Brakes	Hydraulically operated wet disc brakes
Brakes parking and emergency	SAHR type, fail safe wet disc brakes
Fuel tank	150 liters
Hydraulic jacks	TJ60 (front), TJ75 (rear)
Hand throttle	Standard
#Exhaust catalyzer	Option (standard with Tier4i engines)
#Fast filling systems	For fuel/complete
#Rod rack on carrier side	For 12-20 ft rods
#Wheel chocks and holders	2 pieces

Spare and extra items

#Spare rock drill	
#Spare wheel assembly	
#Special tools for rock drill	
#Tunnel laser set	
#Extra Documentation	Paper/Toolman, one set

Additional options features/components

* Alternative options features/components

Sandvik Mining and Construction reserves the right to change this specification without further notice.

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