Technical Specification
6-9466-C
2013-05-28

Sandvik DD531-S60C
Underground Drill Rig

The Sandvik DD531-S60C is a 3-boom electro hydraulic jumbo for fast and accurate drilling in tunneling and cavern excavation of 12 - 75 m² cross sections.

The advanced, electronic controlled drilling system with added automatic functions and different optional instrumentation levels enable productive and high quality tunneling. The built in diagnostics help to minimize maintenance time.

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

The SB60 universal booms have a large optimum shaped coverage and full automatic parallelism. The booms can also be used for cross-cutting, bolt hole drilling and extension drilling applications. The powerful 4-wheel-drive center articulated carrier ensures rapid and safe tramming with good balance. The noise and vibration insulated safety cabin provides an ergonomic workplace with excellent visibility for both tramming and drilling.

Coverage	75m²
Boom	SB60
Feed	TF500, 10-16ft
Rock drill	RD525, 25kW
Hole diameter	43-64 mm
Hole length	Up to 4660 mm
Control system	TPC561
Cornering	4 610 mm
Weight	33 000 kg (depending on option)

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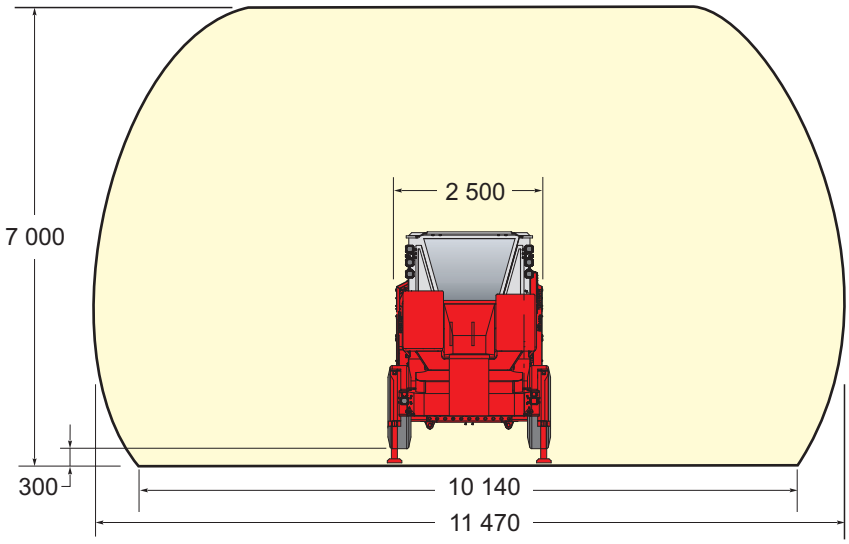
Sandvik DD531-S60C

Coverage area



All dimensions in mm

Hydraulic rock drill

Technical Specification 2-1952

Rock drill	RD525
*Optional rock drill	RD520, HLX5
Percussion power	25 kW
Percussion pressure	Max. 235 bar
Percussion rate	93 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
Weight	225 kg
Length	1 010 mm
Profile height	90 mm
Shank lubrication device	Air/oil mist, SLU
Shank lubrication compressor	CT10, 1m³/min (7 bar)
Air consumption	250-350 l/min
Oil consumption	180-250 g/h

Boom

Technical Specification 4-3105

Boom	SB60
Parallel coverage	54 m²
Parallelism	Automatic hydraulic
Boom extension	1 200 mm
Boom weight, net	2 250 kg
Roll-over angle	358°
Bolt hole drilling	Yes

Feed

Technical Specification 3-1400

Feed	TF500-12
Feed force	Max. 25 kN
Feed extension	1 350 mm
*TF feed lengths	10', 12', 14', 16'
*Telescopic feed	TFX6/12, 8/14, 10/16

Feed TF500	Total length (mm)	Hole length (mm)	Rod length (mm)	Net weight (kg)
10'	4 660	2830	3090	470
12'	5 270	3 440	3 700	500
14'	5 880	4 050	4 305	530
16'	6 490	4 660	4 915	560

*Drilling options

#Rod retainer	TRR1 Including safety wire Adds 35mm lenght of the TF-feed.
#Two rod system	Included TRR1 & Safety wire (TF Feed, not for bolting)

Instrumentation options

#Angle, position and depth measurement with data logging	TCAD + TLOG with iSURE I-II design & reporting
#MWD analysis	iSURE III Analysis (only with TCAD option)

 # Additional options features/components
** Alternative options features/components*

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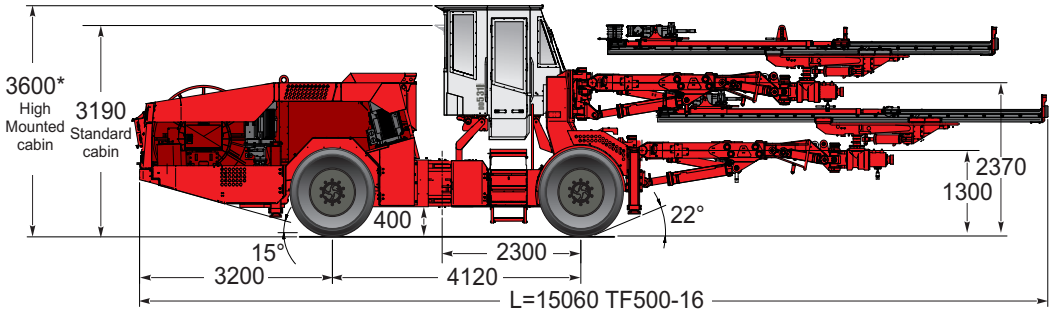
Machine dimensions



Feed	Total length	Total length
TF500-12’	14 400	14 430
TF500-14’	14 620	14 650
TF500-16’	15 060	15 090

All dimensions in mm

Hydraulic system

Powerpack	HPP 575 (75kW)
*Powerpack	HPP 555 (55kW) with RD520 or HLX5 rock drill
Percussion pump	110cc (variable displacement)
Rotation pump	60cc (gear)
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 3x30kW
*Biodegradable oils	Shell Naturelle HFE46/HFE68
#Vacuum pump for hydraulic oil	

Control system

Technical Specification 5-1120

Type	TPC 561, Electric control system
Control panel	TPC563-S, Single user panel
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 voltages	380-690 VAC
*Optional voltage	1000 VAC, 50Hz
Starting method	Star delta starter 380VAC - 690VAC Soft starter 480VAC, 575VAC (USC) Direct on line (DOL) 1000VAC
Voltage fluctuation	± 10%
Automatic cable reel	TCR5E
Cable reel control (in & out)	Operator station
*Cable reel control (in & out)	Rear of unit
Cable plug holder	Hook type holder and cable pull stock
Auxiliary outlet	1x12VDC; 1x24VDC; 1x230VAC
*Sealed AGM batteries	2x12V, 50Ah
#Electric cable rubber or PUR	Depending on voltage (see spec 5-4100)
#Ground fault and overcurrent protection	VYK

Flushing system and *options

Flushing	Water flushing flow and pressure control. Air-mist flushing, option
*Flushing flow supervision	
Water pump	WBP3HP
Water pump capacity	375 l/min
Inlet pressure	2-7 bar
Flushing water pressure	Max. 20 bar
#External air connection	IP5 air cleaner
#Air mist flushing	External water/air connection (incl. air cleaner and flushing flow supervision)
#Water flushing with air cleaning of hole	External water and CT28 compressor (18,5kW)
#Water hose reel + hose	THR5E + 44mm (1¾”), 60 meters

Fire suppression system and options

Tech. Spec. 5-9800

#Hand held fire extinguisher	1 pcs
#Manual fire suppression system	6 nozzles
#Automatic fire suppression system	6 nozzles

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** Alternative options features/components*

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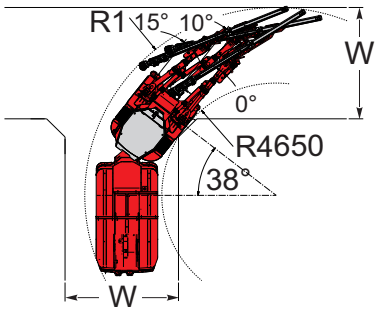
Tramming dimensions



FEED	R1	R2	W
TF500-12'	7 780	4650	4610
TF500-14'	7 780	4650	4610
TF500-16'	7 780	4650	4610
TF500-18'	7 830	4650	4660

All dimensions in mm

Tramming

Tramming speed	Horizontal: 16 km/h 14% = 1:7 = 8° 6,5 km/h
Gradeability	Max. 15°/5°
#Reduced tramming speed	3rd gear lockout

Operator station

Safety cabin	FOPS (ISO 3449)
*Stainless steel cabin	FOPS (ISO 3449)
*High mounted cabin	3 600mm
Operation	Seated operation
Sound pressure level according to EN791	Operator station: 72 dB(A)
Seat	Ergonomic, adjustable Rotating operator seat for drilling and tramming
Air conditioning	Filtering capacity EU 6/7
Windows	Safety laminated, with wiper Stainless steel windows frame
Reversing alarm	Standard
#CD player/radio/MP3	
#Cabin heating	During drilling and tramming
#Reversing camera	On machine rear and side
#Boot washer	At cabin access
#Front screen protection bar	

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)
#Amber strobe light	Flashing (24V)

*Packages

*Harsh water packages	Basic or advanced See sec sheet 5-9100
#Regional package	AUS; EU
#Antifreezing	Block heater for engine Hydraulic oil tank heater Water circuit flushing

Carrier

Carrier	TC8
Carrier type	Wheel mounted, frame steering
Frame steering	± 38°
Rear oscillation	± 8°
Ground clearance	400 mm
Diesel engine	MB OM906LA, 170kW, Tier 3
#Exhaust catalyser	
Transmission	Hydrodynamic, Spicer HR32000
Axles	Spicer
Tyres	14.00-24 PR28
Service Brakes	SAHR type, fail safe 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 trottle	Standard
#Fast filling systems	Complete
#Rod rack on carrier side	For 10-16ft rods and two shank adapters

Extra items

#Spare rock drill	
#Spare wheel assembly	Standard or foam filled
#Special tools for rock drill	
#Documentation	Extra manuals

 # 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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