

Sandvik DS510-C

Underground Drill Rig



The Sandvik DS510-C equipped with the SB120S boom is offering the widest coverage in the market place for civil construction tunneling and large underground mining operations.

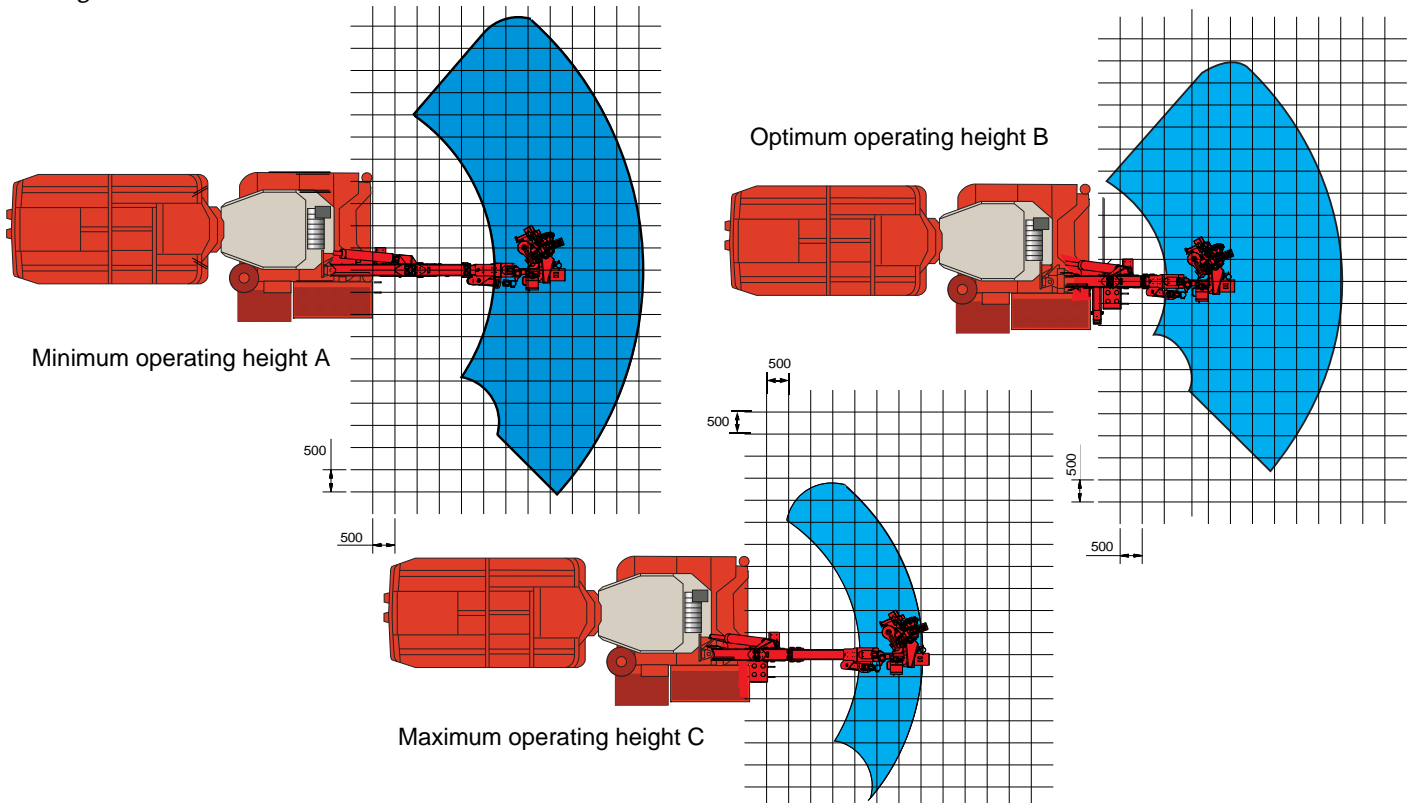
Although the coverage is huge, the combination of BH bolting head and compact but powerful RD314 rockdrill provides the Sandvik DS510-C with the ability to install the longest possible rockbolt in a given drift. Like all other Sandvik underground drills the Sandvik DS510-C benefits from the Sandvik design philosophy that focuses on the operator.

For example the air-conditioned enclosed cabin can be tilted 10° backward to improve operator's comfort, when bolting at maximum reach.

Bolting coverage	Up to width 17m, height 12.6m
Boom	SB120S
Bolting head	BH
Rock drill for BH15 to BH30	RD314
Rock drill for BH40 to BH60	HL510
Hole diameter	33 - 51 mm
Bolt length	1.5 to 6.0 m
Control system	TPC 301 EW
Total weight (depending on options)	25 000 Kg

Rockbolt type:	
BC system (ex P-system)	Bulk cement grouted rockbolts
GCR system (ex C-system)	Resin grouted rockbolts
WI system (ex SW-system)	Water inflated expandable rockbolts
S system	Splitset rockbolts
M system	Mechanical shell, point anchored rockbolts

Coverage



Hydraulic rock drill

Technical Specification RD314: 2_1055; HL510: 2_1150

Rock Drill	RD314	HL510S
Percussion power	14 kW	16 kW
Percussion pressure	120 - 160 bar	120 - 175 bar
Percussion rate	110 Hz	59 Hz
Rotation speed	0...300 rpm	0...250 rpm
Rotation torque	Max. 505 Nm	Max. 400 Nm
Hole size	33 - 51 mm	51 - 64 mm
Shank adapter	R32 Female or T38 Male	R32 Female or T38 Male
Weight	115 kg	130 kg
Flushing water pressure	Max. 20 bar	Max. 20 bar
Shank lubrication	Air /oil mist SLU, CT10	Air /oil mist SLU, CT10;
Compressor capacity	1m ³ /min (7 bar)	1m ³ /min (7 bar)

Boom

Technical Specification 4_3320

Boom type	SB120S
Length, min	6130 mm
Boom extension	1900 mm
Boom weight, net	3000 kg
Bolting head rotation	360°

Bolting head

Technical Specification 8_5200S

Bolting head type and feed	BH and KS140
Bolt carousel capacity	8 Rockbolts

*Drilling options

*Bolting alternatives	BC, GCR,, WI, S, M systems
*Automatic Resin Injection (ARI)	spec 8-611 S
*"In the hole" Resin cartridges injection	spec 8-612 S
*BH cassette for square plate 120mm	10 rockbolts
*BH cassette for square plate 100mm	12 rockbolts
*BH cassette for square plate 85mm	16 rockbolts
*Rod retainer	PITO 9H

*Instrumentation options

*Angle	TMS D (directions of drilling)
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*Cleaning system

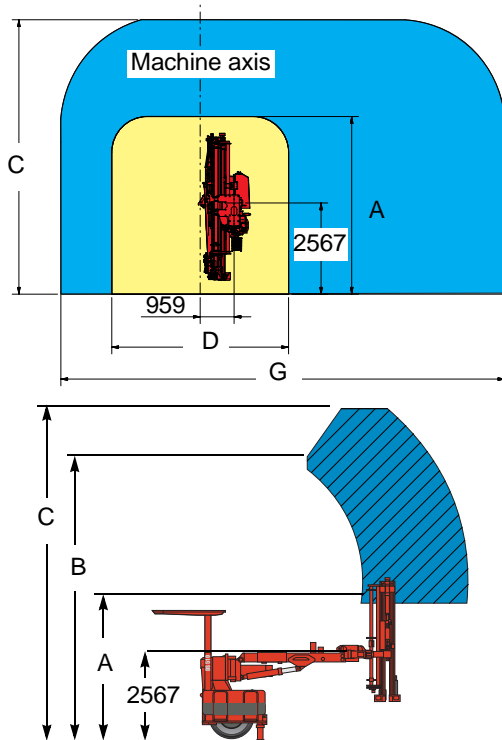
*Pressure cleaning system with reel	Max. 15 bar
*High pressure cleaning system with reel	Max. 180 bar
*Bolting module continuous washing system	

*Greasing systems and options

*Greasing unit with pump, reel and nozzle	Manual
*Automatic greasing system	Carrier, boom
*Bolting head oiler	

*Optional features/components

Coverage



		Minimum operating height and width: A,D	Optimum operating height: B	Maximum operating height: C	Maximum width: G
RD314	BH15	2930	8320	10260	12460
	BH18	3150	8320	10260	12460
	BH22	3650	8320	10260	12460
	BH24	3900	8780	10720	13380
	BH27	4110	8780	10720	13380
	BH30	4450	8780	10720	13380
HL510	BH40	5650	9620	11560	15060
	BH50	6650	10620	12560	17060
	BH60	7620	10620	12560	17060

Hydraulic system

Filtration size	20 micron (pressure) 12 micron (returns)
Oil cooler	Cooling capacity 30kW OW30 water cooler
Hydraulic oil tank volume	200l Max.
Tank filling	Manual pump
Powerpack	HPP355 (55kW)
Percussion pump	130 l/min (variable)
Rotation pump	45 l/min (gear)
*Oil cooler	Harsh water
*Tank filling	Electric pump
*Biodegradable oils	Shell Naturelle HFE

Control system

Type	TPC301 EW
Power control	Ajustable full power Ajustable collaring power
Anti-jamming control	Ajustable anti-jamming pressure
Rotation control	Ajustable rotation speed
Flushing control	Water flushing pressure Air-mist flushing, option
Returns automatics	Rock drill

*Fire suppression system and options

*Manual fire suppression system (Ansul)	6 nozzles + 1x7,7kg hand held fire extinguisher
*Automatic fire suppression system (Ansul)	6 nozzles + 1x7,7kg hand held fire extinguisher
*Hand held fire extinguisher	1x7.7kg

Electric system and *options

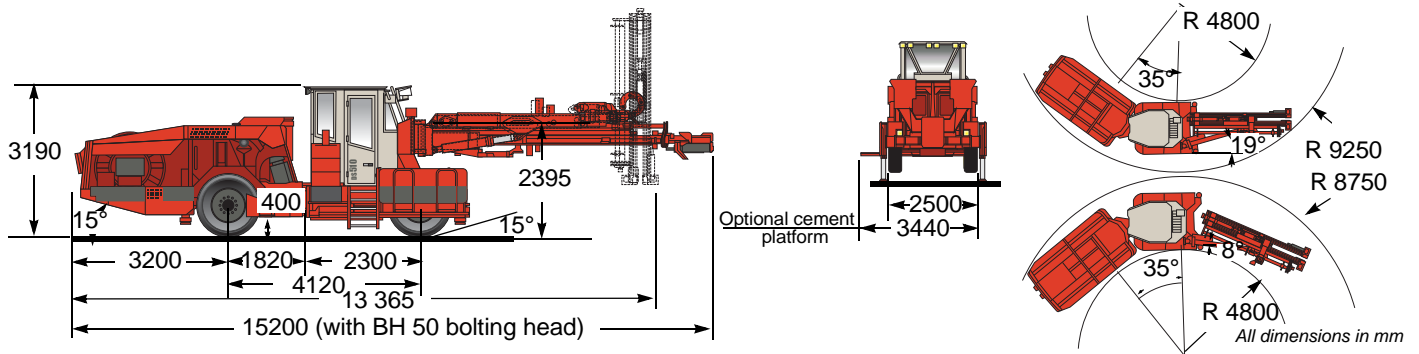
Total input power	90 kW
Main switch	MSE 10
Standard voltages	380-690 VAC 50Hz or 60Hz
Voltage fluctuation	+/- 10%
Automatic cable reel	TRC3E
Cable reel control (in & out)	Operator station
*Electric cable rubber or PUR	150 meters
*Ground fault and overcurrent protection	VYK200
*Star delta starting	380VAC - 690VAC
*Optional voltage	1000 VAC, 50 Hz
*Optional outlet	230V outlet Max.16A 3-phase outlet, network voltage 3-phase outlet Max. 15kVA with transformer

Flushing system and *options

Flushing	Water
Water pump	WBP I (3 kW)
Water pump capacity	65 l/min (Max. 15bar)
Inlet pressure	2-7 bar (while drilling)
Compressor	CT10 (7,5 kW, 1000l/min at 7 bar)
*Air mist flushing packages	For external or internal supply of air and water
*Water hose reel	THR 5E
*Water hose 32mm (1"1/4)	130 meters
*Double flushing (manual)	CT16 (11 kW) + Air receiver 1x60l

*Optional features/components

Machine dimensions



Tramming

Tramming speed	16 km/h on horizontal 14% = 1:7 = 8° 5km/h
Gradeability / Inclination	Max. 15° / 5°

Operator's station

Safety cabin	FOPS
Controls	Drilling and tramming
Sound pressure level according to EN791	Operator station: LPA 80 dB(A) Emitted: LWA124 dB(A)
Seat	Ergonomic, adjustable with seat belt
Cabin air conditioning	Cooling *Heating (drilling and tramming) Filtration 100µ
Front screen protection bars	
*Cabin audio system	MP3 player / CD player / radio loud speakers
*Cabin	Tilttable 10° Stainless steel
*Boots washer	

Lights

Front working lights	4x35W HID (24V)
Front driving lights	2x35W HID (24V)
Rear working lights	2x35W HID (24V)
Rear driving lights	2x35W HID (24V)
Remote search light	2x35W HID (24V)
Mixer light	1x70W (If system)
*Extra working lights	2x35W HID (24V)
*Amber strobe light	

*Packages

*Harsh water options (level 1)	Oil cooler + boom cylinders
*Harsh water options (level 2)	Level 1 + steering and jacks cylinders
*Regional	USC, AUS, EUR

Spare items

Spare rock drill	RD314
Spare wheel assembly	Standard or foam filled
Special tools for rock drill	

Carrier

Carrier type	Wheel mounted, frame steering
Carrier name	TC8
Transmission	Spicer 20 000 Hydrodynamic
Axles	Spicer
Tyres	14.00-24
Diesel engine	MB OM904LA, Tier III, 110kW
Diesel engine control	Electronic
Exhaust muffler	Standard
Brakes	Service, hydraulically operated wet disc brakes. Emergency & parking SAHR type, fail safe wet disc brakes
Ground clearance	400 mm
Rear oscillation	+/- 8°
Frame steering	+/- 35°
Fuel tank	150 liters
Hydraulic jacks	TJ60/Tj75 Vertical (front/rear)
*High speed carrier	MB OM906LA diesel engine, Tier III, 160kW
*Basket boom	SUB 3iA FOPS safety canopy
*Screen handler	Separate boom (Not compatible with Basket boom option)
*Exhaust	Catalyser
*Fast filling systems	For fuel/complete (Wiggins)
*3rd tramming gear	Lock out (Max. 6.5km/h)
*Wheel chocks and holder	2 pieces
*Reversing camera	Rear and side
*Sealed gel batteries	
*Battery jump start	
*Foam filled tyres	
*Spooling device for cable reel	
*Remote control for reel(s)	
*Cement dust collector	
<i>*Optional features/components</i>	