



# DS511 ROCK SUPPORT BOLTER

## TECHNICAL SPECIFICATION

Sandvik DS511, equipped with SB120S boom, offers the widest coverage currently available for underground mining operations and civil construction tunnelling.

Sandvik DS511 installs the industry's longest rock bolts in drifts with ease, thanks to its Sandvik BH bolting head and compact yet powerful Sandvik RD314 rock drill.

Like all Sandvik underground drills, Sandvik DS511 benefits from a design philosophy that focuses on the operator. The air-conditioned enclosed cabin can be tilted back 10 degrees when bolting at maximum reach, just one of many features designed to improve the operator comfort.

### KEY FEATURES

Hydraulic rock drill	RD314, 14 kW
Bolting head	BH
Boom	SB120S
Bolt length	From 1.5 m to 6 m (5' to 20')
Turning radius (external)	9 250 mm
Tramming / bolting width	2 740 mm / 3 440 mm
Tramming height (cabin / canopy)	3 320 mm / 3 600 mm
Transport / bolting length	11 370 mm / 10 950 mm
Total weight	25 000 kg depending on options



## HYDRAULIC ROCK DRILL

Type of rock drill	RD314 (TS2-137)
Percussion power	14 kW
Percussion pressure	Max. 160 bar
Percussion rate	110 Hz
Rotation speed	Max. 520 rpm (with OMS100)
Rotation torque	340 Nm (with OMS100)
Hole size (bolting)	33 - 43 mm
Shank adapter	45 mm / R32 female
Weight	122 kg
Length	571 mm

## BOLTING HEAD

Type of bolting head	BH (TS2-277)
Bolting head feed	KS140
Bolt carousel capacity	8 rock bolts with 200 x 200 mm maximum plate size
Bolt head length	Max. 7 535 mm (BH60)
Net weight	Max. 2 174 kg (BH60)

## BOLTING BOOM

Type of boom	SB120S (TS2-326)
Boom extension	1 900 mm
Boom weight, net	3 000 kg
Roll-over angle	360°

## HYDRAULIC SYSTEM

Powerpack	HPP355 (55 kW)
Percussion pump	100 cc (variable)
Rotation pump	33 cc (gear)
Filtration size (pressure / return)	20 µ / 12 µ
Oil tank volume	200 liters
Oil tank filling pump	Electric
Cooler for hydraulic oil	OW30 oil-to-water (30 kW)

## CONTROL SYSTEM

Type of control system	TPC301 EW
Power control	Adjustable full power Adjustable collaring power
Anti-jamming control	Adjustable anti-jamming pressure
Rotation control	Adjustable rotation speed
Flushing control	Water flushing flow and pressure control air-mist flushing, option
Boom control	Proportional, four movements simultaneously
Returns automatics	Rock drill

## ELECTRIC SYSTEM

Standard voltages	380 ... 690 V (± 10%), 50 or 60 Hz
Total installed power	90 kW
Main switch gear	MSE 10
IP classification	Specification TS2-132
Starting method	Star delta 380 V - 690 V Soft starter 575 V
Automatic cable reel	TCR3EL
Cable reel control	Operator station and remote control at rear machine
Batteries	2 x 12 V, 145 Ah
Auxiliary outlet	1 x 110 V or 1 x 230 V, 16 A
Front lights (combined working and driving)	6 x 50 W LED (4 200 lm, 6 000 K)
Rear lights (combined working and driving)	4 x 50 W LED (4 200 lm, 6 000 K)
Remote search light	1 x 50 W LED (4 200 lm, 6 000 K)
Remote search light	1 x 50 W LED (4 200 lm, 6 000 K)
Parking rear brake / park lights	2 x Red LED
Stair and service lights	LED (24 V)

## AIR AND WATER SYSTEM

Flushing	By water
Water pump type	WBP1
Water pump capacity	65 l/min
Water pump inlet pressure	2 bar (Min.)
Flushing water pressure	10 - 15 bar
Shank lubrication device	SLU1 (Air / oil mist)
Air compressor	CTN10, 1 m³/min (7 bar)
Air cleaner for external air supply	IP5
Rock drill oil consumption	100 - 200 g/h
Rock drill air consumption	150 - 250 l/min

## OPERATOR'S SAFETY CABIN

Safety cabin	FOPS (ISO 3449)
Operation	Seated drilling and tramming
Sound pressure level according to EN 16228	Operator station: 80 dB(A)
Seat	Ergonomic, adjustable for tramming and drilling including seat belt
Air conditioning system	For drilling and tramming
Audio system	CD / MP3-player, radio and loudspeakers
Boot washer	At cabin entrance
Cabin safety grill	Standard

## CARRIER

Type of carrier	TC8
Steering system	Frame steering
Carrier articulation	± 35°
Rear axle oscillation	± 8°
Ground clearance	400 mm
Diesel engine	MB OM904LA, 110 kW, Tier 3, Stage IIIA
Diesel engine controls	Electronic
Exhaust catalyzer + muffler	Standard
Transmission	Hydrodynamic, Spicer T20 000
Tires	14.00-24
Service brakes	Hydraulically-operated wet disc brakes
Parking and emergency brakes	Emergency and parking SAHR type, fail-safe wet disc brakes
Tramming speed	16 km/h (Horizontal) 5 km/h (14%=1:7=8°)
Gradeability / sideways	Max. 15° / 5°
Fuel tank	150 liters
Hydraulic jacks	2 x TJ60 Vertical (front) 2 x TJ75 Vertical (rear)
Centralized greasing points	Specification TS2-463
Hand held fire extinguisher	1 x 7.7 or 9 kg (type ABC)
Tramming alarm	Standard
Knowledge Box™	Connectivity solution (TS2-535)
Colour scheme	Sandvik
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 FEATURES AND PACKAGES

### Bolting head

*Bolt carousel capacity	10 rock bolts for square plate 200 mm 12 rock bolts for square plate 150 mm
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### Bolting option

*Bolting alternatives	GCR, WI, S, BCS, M, K
Automatic resin shooting	ARI system (TS2-282)
"In the hole" resin cartridges injection system	Specification TS2-290
Screen handler	SB93RSH (TS2-325)
Cement dust collector	Above the mixer
Bolt storage	On right side
Bolting head oiler	Recommended with P-system

### Hydraulic system

By pass	Oil filter
Vacuum pump	For hydraulic oil

### Instrumentation

Bolting instrumentation	SBI (Sandvik bolting instrumentation) Navigate with fan laser or tachometer
iBOLT systematic bolting	iSURE IV bolting
Access detector	Mandatory in Europe (TS2-211)

## OPTIONAL FEATURES AND PACKAGES

### Air and water system

*Air compressor	CT28 (2.8 m³/min, 18.5 kW)
Water hose reel and hose	THR5E and Ø32 mm (1 ¼"), 130 m
Compressed air outlet	Quick coupling for pneumatic tools

### Cleaning system

Low pressure system with reel	Up to 15 bar (TS2-343)
High pressure system with reel	Up to 220 bar (TS2-343)
Bolting module continuous washing system	Remote controlled

### Greasing systems

Manual system	Specification TS2-463
Automatic system	Lincoln (complete)
Automatic system	For utility boom

### Electric system

*Voltage option	1 000 V (50 or 60 Hz) with Direct-On-Line starter (DOL)
* Electric cable	Specification TS2-121
Ground fault and overcurrent protection	VYK
Dewatering pump outlet	380 - 690 V (Max. 8 kW)
Battery jump start	Optional
Amber flashing light	LED (24 V)

### Operator's safety cabin / canopy

*Safety canopy	FOPS (ISO 3449)
*Stainless steel cabin	FOPS (ISO 3449)
Cabin heating	During tramming and drilling

### Fire suppression system

Additional fire extinguisher	1 x 7.7 or 9 kg (type ABC)
Manual or automatic system	Ansul, 6 nozzles (TS2-460)
Fire suppression system	Sandvik Eclipse™ (TS2-461)

### Carrier

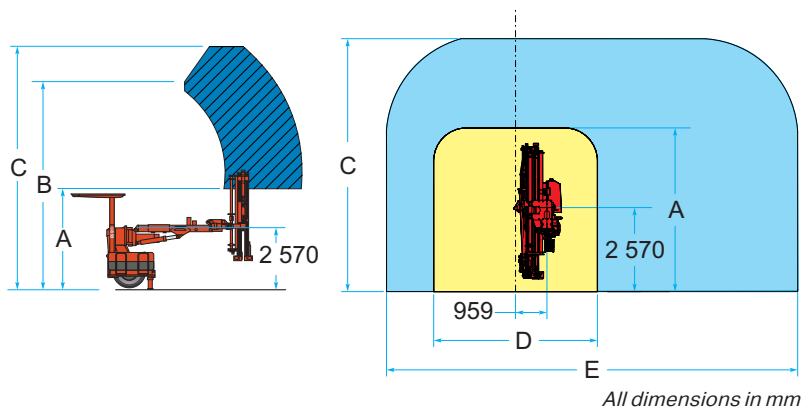
Reduced tramming speed	3 rd gear lockout
Tramming camera	Rear and side
*High speed carrier (MB)	TC8, incl. MB OM906LA, 170 kW, Tier 3, Stage IIIA, with Spicer T32 000 transmission
*High speed carrier (QSB)	TC8, incl. QSB6.7, 164 kW, Tier 4i, Stage IIIB, with Spicer T32 000 transmission.
*Foam filled tires	4 pcs
Fast filling systems	Complete
Wheel chocks and holders	2 Sets
Rod rack	For 4 rods (N/A with bolt storage)

### Extra Item

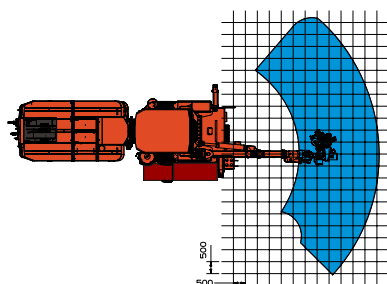
Spare rock drill	RD314
Spare wheel assembly	Air or foam-filled
Special tools for rock drill	Field tool set (TS2-119) Complete tool set (TS2-118)
Documentation	Extra, Catbase, Link one manuals
Package: Country specific options	USC, AUS, EUR, SWE
Package: Harsh water	Basic (TS2-049)
Package: Anti-freezing	Block heater for engine, heater for hydraulic oil, water circuit flushing with air, antifreeze adding in water circuit.

\*) Replaces standard feature

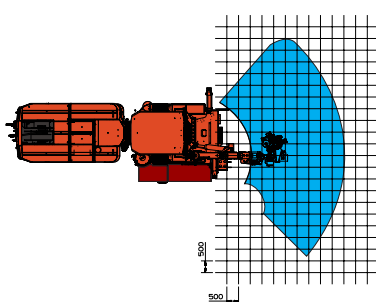
Bolting head	Minimum operating height and width (A;D)	Optimum operating height (B)	Maximum operating height (C)	Maximum width (E)
BH15	2 930	8 320	10 260	12 460
BH18	3 150	8 320	10 260	12 460
BH22	3 650	8 320	10 260	12 460
BH24	3 900	8 780	10 720	13 380
BH27	4 110	8 780	10 720	13 380
BH30	4 450	8 780	10 720	13 380
BH40	5 650	9 620	11 560	15 060
BH50	6 650	10 620	12 560	17 060
BH60	7 620	10 620	12 560	17 060



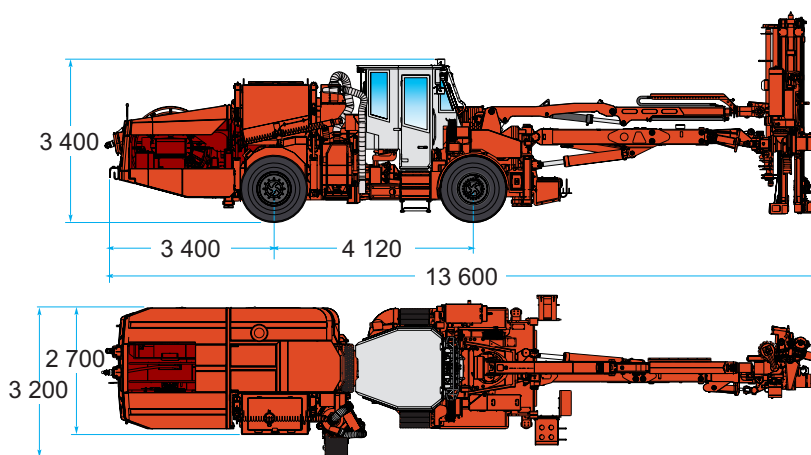
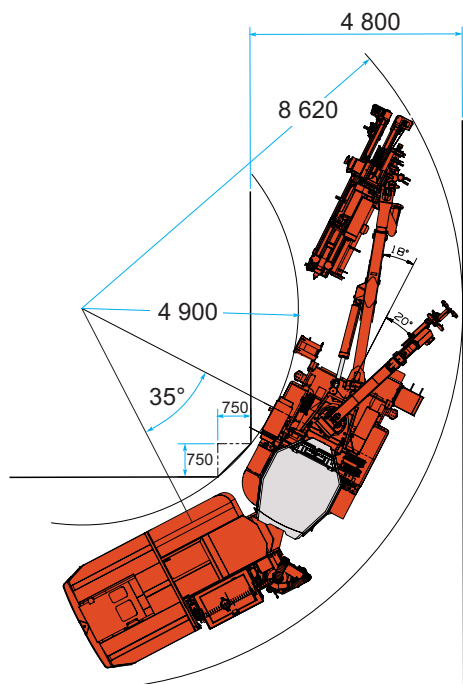
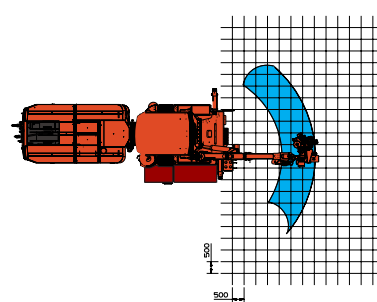
Minimum operating height A



Optimum operating height B



Maximum operating height B



All dimensions in mm

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