

# DS312 ROCK SUPPORT BOLTER

## TECHNICAL SPECIFICATION

Sandvik DS312 is a one-man-operated rock bolter for rock reinforcement in underground mines with small and medium cross sections.

The Sandvik DS312 is the ultimate versatile rock bolter. Powered by low emissions diesel engine (Tier 3, Tier 4F, Canmet or Stage V), the Sandvik DS312 can be used for both rehabilitation or rock reinforcement in production areas.

Sandvik DS312 can install most common rock bolts, ranging in length from 1.5 m to 3 m (5' to 10'), at a height up to 7,7 m (25').

The operator works under supported ground, protected under a FOPS certified cabin structure. Mechanization of the bolting process ensures efficient, constant and durable rock bolt integrity.

Built from proven and reliable components, Sandvik DS312 is designed for high availability.

The Sandvik DS312 used RD314 rock drill for fast performance, installed on the Sandvik Bolting Head with low operating cost and optional Sandvik Bolting Instrumentation system.

With the SB40SH screen handler and its 360° continuous rotation, the Sandvik DS312 allows fast mechanized meshing process.

### KEY FEATURES

Coverage area	6 350 x 2 100 mm (roof)
Hydraulic rock drill	1 x RD314, 14 kW
Bolting head	1 x SBH, (5' to 10')
Boom	1 x B26XLB
Screen handler boom	1 x SB40SH
Turning width (T-section)	4 610 mm (with SBH7 and B26B)
Transport width	2 020 mm
Transport height (canopy)	2 140 mm / 3 100 mm
Transport height (cabin)	2 920 mm or 2 670 mm
Transport length	12 450 mm (with SBH8)
Total weight	16 000 - 18 000 kg depending on options



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## HYDRAULIC ROCK DRILL

Type of rock drill	RD314 (TS2-137)
Percussion power	14 kW
Percussion pressure	Max. 180 bar
Percussion rate	110 Hz
Rotation speed	Max. 530 rpm
Rotation torque	Max. 340 Nm
Hole size	33 - 43 mm (1"5/16 - 1"23/32)
Recommended rod	R32 - HEX25 - R25
Shank adapter	R32 female
Weight	115 kg
Filling device for accumulators	Specification TS2-430

## BOLTING HEAD

SBH (TS2-208)	SBH5	SBH6	SBH7	SBH8	SBH10
Bolt length	mm 1 525	1 830	2 135	2 440	3 050
Drill steel length	mm 1 975	2 175	2 475	2 795	3 405
Hole depth	mm 1 755	1 950	2 250	2 570	3 185
Total length (A) (drilling)	mm 2 520	2 820	3 120	3 440	4 090
Total length (B) with RHR50 (bolting)	mm 2 710	3 010	3 310	3 630	4 280
Total length (B) with RD315 (bolting)	mm 2 770	3 070	3 370	3 690	4 340
Recommended operating height with RD315 (min.)	mm 2 970	3 270	3 570	3 890	4 540
Total weight*	kg 1 040	1 070	1 100	1 150	1 280

*Dimensions +/- 5 mm*

*\*The weights are theoretical and given for information  
Dimensions and weights are for a bolting head equipped*

## BOOM

Type of boom	B26XLB (TS2-207)
Boom extension	1 700 mm
Boom weight, net	1 500 kg
Roll-over angle	360°

## SCREEN HANDLER BOOM

Type of screen handler boom	SB40SH (TS2-442)
Boom coverage	Up to 6.2 x 6.2 m drift
Boom swing	± 90° (180°)
First boom lift (up / down)	60°
Secondary boom lift (up / down)	140°
Boom extension	1 700 mm
Screen handler tilt	± 90° (180°)
Manipulator roll-over	± 90° (180°)
Screen roll-over	360° (continuous)
Max. weight allowed	50 kg
Weight (without hosing)	810 kg

## HYDRAULIC SYSTEM

Powerpack	HPP355 (1 x 55 kW) IE3 electric motor
Filtration size (pressure / return)	20 µ / 10 µ Quick couplers for kidney filtration
Oil tank volume	180 liters
Oil tank filling pump	Electric
Cooler for hydraulic oil	OW30 oil-to-water (30 kW)

## DRILLING CONTROL SYSTEM

Type of control system	THC561 (TS2-362)
Operating principle	Hydraulic control
Manual boom control	Direct control Fully proportional Hydraulic parallelism
Drilling control	Manual collaring Feed / percussion pressure control Feed / percussion pressure monitoring Anti-jamming system Flushing control (On /Off/Auto.)
Drilling safety	Boom movements inhibition switches

## ELECTRIC SYSTEM

Standard voltage	380 - 690 V (± 10%)
Total installed power	70 kW
Main switch gear	MSE 5
IP classification	Specification TS2-132
Starting method	Star Delta 380 V - 575 V DOL 600 - 690 V
Automatic cable reel	TCR1
Cable reel controls	At operator station and remote control at rear of the machine
Sealed AGM batteries	2 x 12 V, 95 Ah
Cable plug holder	On central rear hood
Front lights (combined working and driving)	4 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)
Search light	Remoted with cabin: 1 x 40W LED (2 300 lm, 5 700 K) Manual with canopy: 1 x 17W LED (600 lm, 6 000K)
Rear brake / parking lights	2 x Red LED

## AIR AND WATER SYSTEM

Flushing of holes	By water
Water booster pump type	WBP1 (4 kW)
Water pump capacity	33 l/min at 15 bar (input pressure = 4 bar)
Water pump inlet pressure	2 bar (Min.)
Flushing water pressure	10 - 15 bar
Shank lubrication device	SLU1 (air / oil mist)
Air compressor	1 m <sup>3</sup> /min at 7 bar
Oil consumption	100 g/h
Air consumption	250 l/min

## OPERATOR'S SAFETY CABIN

Standard cabin	FOPS / ROPS (ISO 3449 / 3471) Height 2 920 mm
Operation	Standing drilling, seated tramming
Sound pressure level according to EN 16228	Operator station: 80 dB(A)
Operator's seat	Ergonomic T-back seat
Air conditioning	Cooling only
Tramming cameras	On rear frame and cabin or canopy

**CARRIER**

Type of carrier	NC5-17
Steering system	Frame steering
Carrier articulation	± 38°
Rear axle oscillation	± 10°
Ground clearance	320 mm
Diesel engine	Deutz TCD2012, 74 kW, Tier 3, Stage IIIA, Canmet, China 2
Exhaust catalyzer	Standard
Transmission	Hydrostatic, automotive
Axles	Dana Spicer 123 (front and rear) with extended differential breathers
Tires	12.00-20 foam filled tire
Service brakes	Hydrostatic and positive braking
Parking and emergency brakes	Hydraulic oil immersed multiple disc brakes on both brakes
Tramming speed	12 km/h (horizontal) 5 km/h (14%=1:7=8°)
Gradeability / sideways tilt	Max. 15° / 5° (according to ISO 18758)
Fuel tank	90 liters
Tramming oil tank	55 liters
Carrier stabilization	2 x Telescopic (front) 2 x Vertical (rear)
Bolt storage	Left side
Tramming alarm	Standard
MySandvik insight	Remote monitoring system
Documentation	1 x Operator's manual 1 x Technical manual (in English only) 1 x Parts manual (in English only) 2 x USB key of manuals (PDF files) 1 x Online Parts manuals (MySandvik)

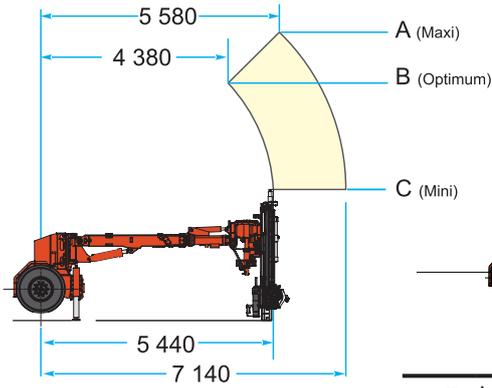
**OPTIONAL FEATURES AND PACKAGES**

<b>Hydraulic rock drill</b>	
*RHR50 rotary drill	Instead of RD314 (drilling line)
<b>Boom</b>	
*Type of boom	SB70S instead of B26XLB (with SBI) B26B instead of B26XLB
Boom suspension system	Specification TS15-232
<b>Bolting option</b>	
*Bolting alternatives	GCR, GCC, WI, S, M
Two bolt lengths carousel	For SBH10 and SBH8
Grabbers extension	2 x extensions for SB40SH
Bolting head oiler	For GCR and GCC system (TS2-291)
*Instrumentation package	SBI (TS2-085), with SB70S boom
<b>Hydraulic system</b>	
*Biodegradable oils	Condat HFDU68 Flame Proof
<b>Drilling control system</b>	
Access detector system	Mandatory in Europe (TS2-211)
Access protector system	Mandatory in Canada (TS2-211)

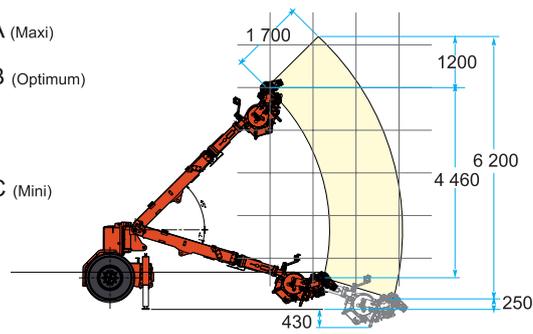
**OPTIONAL FEATURES AND PACKAGES**

<b>Electric system</b>	
*Optional voltage	Multivoltage (380 - 1000 V), at 50 or 60Hz
Starting method	Star Delta 600 - 690 V
*Electric cables	Specification TS2-121
Ground fault and overcurrent protection	VYK (N/A USC package) with pilot cord (optional)
Auxiliary outlet	1 x 110 V or 1 x 230 V, 16 A
Battery jump start	Optional
Dewatering pump outlet readiness	8 kW (site voltage 380 - 690 V) N/A USC package
Amber flashing light	LED (24 V)
<b>Air and water system</b>	
Air mist flushing kit	Specification TS2-285
*Air compressor	2.8 m³/min at 7 bar
Water hose reel with water hose	THR with 32 mm (1 ¼"), 80 meters
Water hose with hooks	32 mm (1 ¼"), 80 meters
<b>Cleaning system</b>	
HP system with reel	Up to 180 bar (TS2-343)
<b>Greasing systems</b>	
Centralized greasing points	Specification TS2-463
Manual system	Greasing gun and cartridge with hose reel (TS2-463)
Automatic system	Carrier (TS2-463)
<b>Operator's safety cabin / canopy</b>	
*Safety canopy	FOPS (ISO 3449)
*Low cabin	FOPS / ROPS certification Height 2 670 mm, During drilling and tramming
Cabin heating	Radio / MP3 / Bluetooth and loudspeakers
Cabin audio system	For canopy or cabin
Safety grill	
<b>Fire suppression system</b>	
Hand held fire extinguisher	1 x 6 kg Type ABC
Manual or automatic system	6 nozzles, Ansul (TS2-460)
Auto. fire suppression system	Sandvik Eclipse™ (TS2-461)
<b>Carrier</b>	
*Diesel engine	Deutz TCD3.6, 74 kW, Tier4F, Stage V, Canmet Deutz TCD3.6 DWG, 74 kW, China 3 Deutz TCD3.6 DWG, 74 kW, China 4 with DPF (particles filter)
Fast filling system	Complete
Brake release	Manual hand pump
MySandvik productivity	Remote monitoring system
Wheel chocks and holders	2 Sets
*Directional tramming alarm	Cri du Lynx®
<b>Extra Items</b>	
Berg plug and socket	250 A
Spare rock drill	RD314, RD315
Tools and pressure test box	Specification TS2-429
Spare wheel assembly	12.00-20 foam filled tire
Special tools for rock drill	Field tool set (TS2-119) Complete tool set (TS2-118)
Warranty extension	One year (excl. Kazakhstan)
Documentation	Extra paper or PDF manuals
Video recorder and speedometer	For CIS
Package: Country specific options	LAM, USC, AUS, CE package options
*Package: Extremely low ambient temperature	N/A 1 000 VAC and USC package Specification TS2-195
*Package: Harsh water	Basic or advanced (TS2-049)

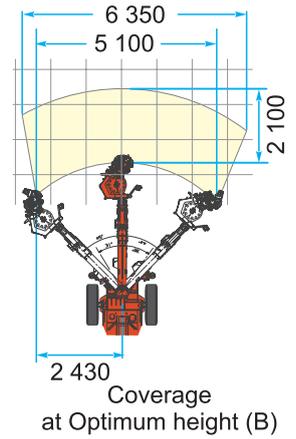
\*) Replaces standard feature



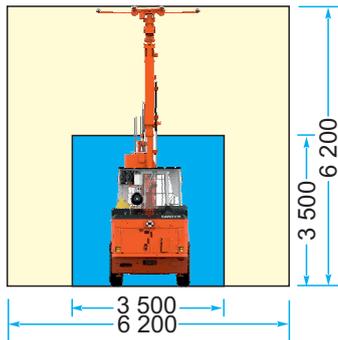
**SB40SH FACE COVERAGE**



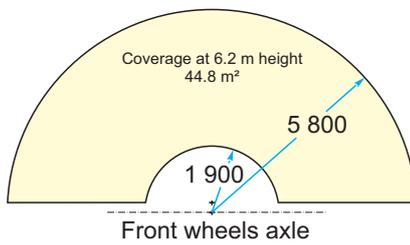
		SBH5	SBH6	SBH7	SBH8	SBH10
DS312 B26XLB	A (Maxi)	mm	6 810	7 030	7 090	7 340
	B (Optimum)	mm	5 610	5 830	5 890	6 140
	C (Mini)	mm	2 970	3 270	3 570	3 890



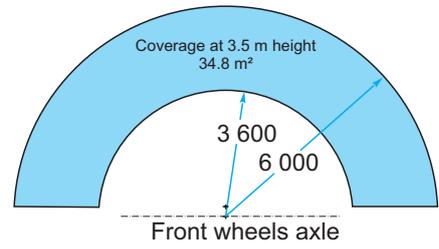
Coverage at Optimum height (B)



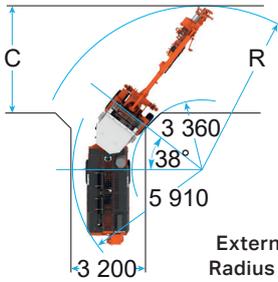
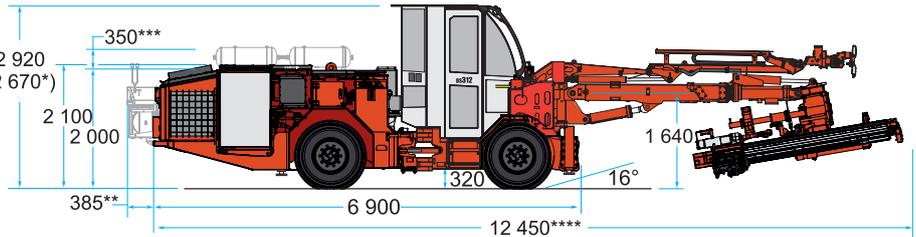
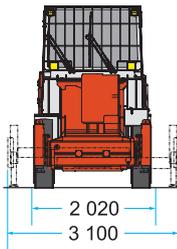
**SB40SH ROOF COVERAGE**



Front wheels axle

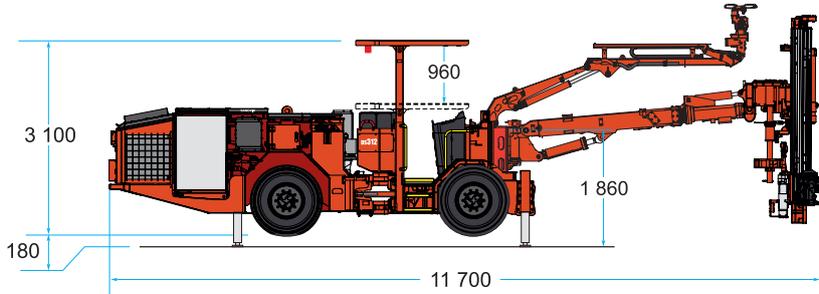


Front wheels axle



External Radius (R) Cornering (C)

DS312 (SBH7, B26B)	7 240	4 610
DS312 (SBH8, B26XLB)	7 800	5 080
DS312 (SBH7, SB70S)	7 750	5 040
DS312 (SBH8, SB70S)	7 910	5 200



\*) With low cabin option \*\*) With Sandvik eclipse option

\*\*\*) With Air receiver option \*\*\*\*) Dimensions with SBH8 and stability at 3°

All dimensions in mm

Sandvik Mining and Rock Solutions reserves the right to make changes to the information on this data sheet without prior notification to users. Please contact a Sandvik representative for clarification on specifications and options.

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