



DS311 STREAMLINE PACKAGE

TECHNICAL SPECIFICATION

Sandvik DS311 is the most compact mechanized rock bolter on the market. Its unique rock bolting concept delivers the best ratio of rock bolt length to drift height.

Sandvik DS311 is a one-man-operated electro-hydraulic rock bolter for rock reinforcement in underground mines with small and medium cross sections. The operator works below supported ground while protected under a FOPS / ROPS certified cabin structure. Mechanization of the bolting process ensures efficient, constant and durable rock bolt integrity.

Built from proven and reliable components, Sandvik DS311 uses RD314 rock drill for fast performance, installed on the Sandvik Bolting Head with low operating cost.

Versatility is also one of the rock bolter's key characteristics. Sandvik DS311 can install most common rock bolts ranging in length from 1.5 to 3 meters (5 to 10 feet).

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
Turning width (T-section)	4 165 mm (with SBH5 and B26B)
Transport width	2 020 mm
Transport height (canopy)	2 140 mm / 3 100 mm
Transport length	11 530 mm (with SBH5)
Total weight	15 000 - 18 000 kg depending on options



1. SANDVIK DS311 - STREAMLINE PACKAGE

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 diameter	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°

HYDRAULIC SYSTEM

Powerpack	HPP355 (1 x 55 kW) IE3 electric motor
Filtration (pressure / return)	20 µ / 10 µ Quick couplers for kidney filtration
Oil tank volume	180 liters
Oil tank filling pump	Manual
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 - 440 V (± 10%), at 50 or 60 Hz
Total installed power	70 kW
Main switch gear	MSE 5
IP classification	Specification TS2-132
Starting method	Star Delta 380 V - 440 V
Automatic cable reel	TCR1
Cable reel control	At operator station and remote control at rear of the machine
Electric cables	PUR 3 x 50 + 3 x 10 mm², 140 m for 380 / 440 V (with pilot cord)
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)
Manual search light	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 m³/min at 7 bar
Oil consumption	100 g/h
Air consumption	250 l/min

OPERATOR'S SAFETY CANOPY

Canopy certification	FOPS/ROPS (ISO 3449)
Standing height	2 930 to 3 100 mm
Seated operations	2 430 to 3 100 mm
Operation	Standing drilling, seated tramming
Sound pressure level according to EN 16228	Operator station: < 95 dB(A)
Operator's seat	Ergonomic T-back seat

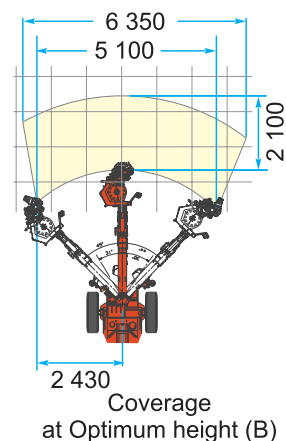
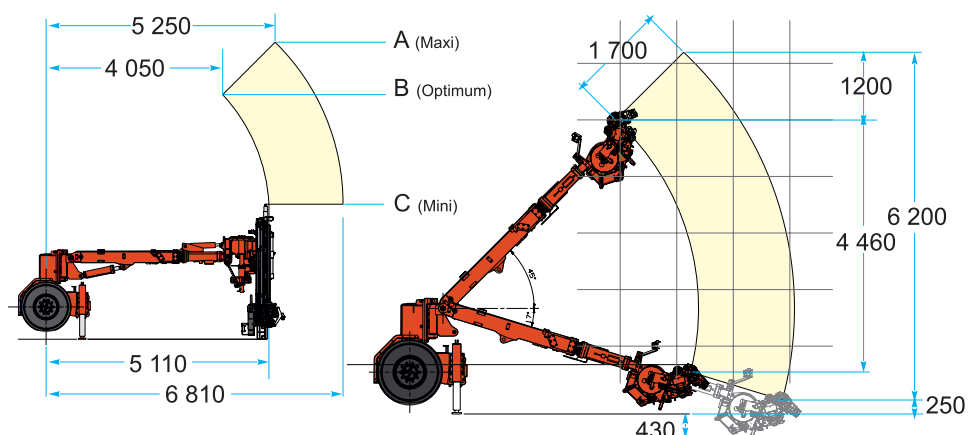
CARRIER

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 112 with extended differential breathers
Tires	12.00-20
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
Knowledge Box™	Connectivity solution (TS2-535) My Sandvik insight readiness (TS2-390)
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)

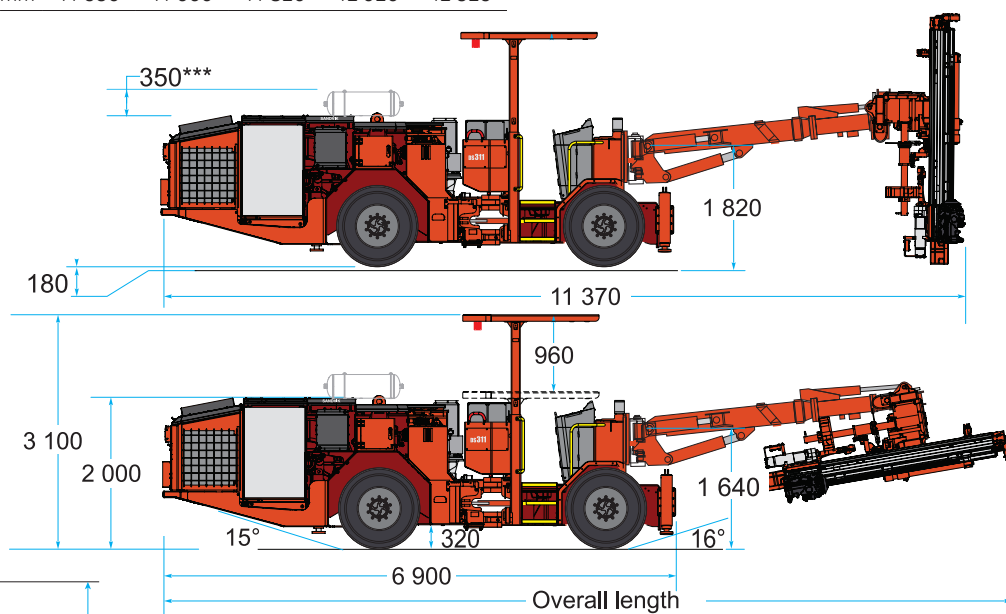
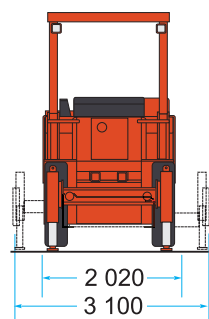
OPTIONAL FEATURES AND PACKAGES

Hydraulic rock drill	
*RHR50 rotary drill	Instead of RD314 (drilling line)
Boom	
*Type of boom	B26B boom instead of B26XLB
Boom suspension system	Specification TS15-232
Bolting option	
*Bolting alternatives	GCR, GCC, WI, S, M
Two bolt lengths carousel on SBH8	For bolting head 7' and 6' bolts
Screen handler	On the bolting head (TS2-355) with hooks for mesh on carrier side
Bolting head oiler	For BC and BCS system (TS2-291)
Rod retainer on SBH	For manual extension drilling with optional rod handler
Electric system	
Ground fault and overcurrent protection	VYK, with pilot cord (optional)
Battery jump start	Optional
Amber flashing light	LED (24 V)
Air and water system	
Air mist flushing kit	External air / water Internal air / External water
*Air compressor	2.8 m³/min at 7 bar
Water hose with hooks	32 mm (1¼"), 80 meters
Cleaning system	
HP system with reel	Up to 180 bar (TS2-343)
Greasing systems	
Centralized greasing points	Specification TS2-463
Manual system	Greasing gun and cartridge with hose reel (TS2-463)
Operator's safety cabin / canopy	
Safety grill	For canopy
Tramming cameras	For canopy and rear carrier
Fire suppression system	
Hand held fire extinguisher	1 x 6 kg Type ABC
Manual system	Ansul, 6 nozzles (TS2-460)
Auto. fire suppression system	Sandvik Eclipse™ (TS2-461)
Carrier	
*Foam filled tires	4 pcs
Brake release	Manual hand pump
MySandik productivity	Remote monitoring system
Wheel chocks and holders	2 Sets
Extra Items	
Berg plug and socket	250 A
Spare rock drill	RD314, RD315
Tools and pressure test box	Specification TS2-429
Spare wheel assembly	Air or 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
Speedometer	For CIS
Package: Country specific options	LAM package (for canopy)
*Package: Harsh water	Basic (TS2-049)

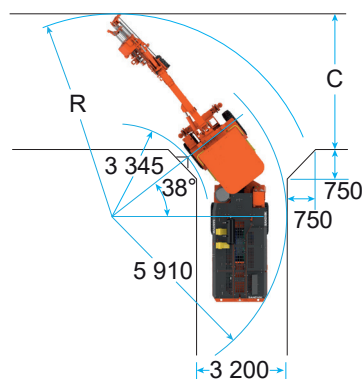
**) Replaces standard feature*



			SBH5	SBH6	SBH7	SBH8	SBH10
DS311 B26XLB	A (Maxi)	mm	6 810	7 030	7 090	7 340	7 650
	B (Optimum)	mm	5 610	5 830	5 890	6 140	6 460
	C (Mini)	mm	2 970	3 270	3 570	3 890	4 540
	Overall length	mm	11 530	11 660	11 820	12 020	12 325



* With Air receiver option



			B26BXL boom		B26B boom **	
			Radius (R)	T-cross (C)	Radius (R)	T-cross (C)
DS311 (SBH5)	mm		7 195	4 485	6 800	4 165
DS311 (SBH6)	mm		7 360	4 650	6 970	4 330
DS311 (SBH7)	mm		7 410	4 700	7 020	4 380
DS311 (SBH8)	mm		7 600	4 890	7 210	4 570
DS311 (SBH10)	mm		7 860	5 150	7 465	4 830

** Optional boom
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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4. SANDVIK DS311 - STREAMLINE PACKAGE