DS311 Streamline package

Technical specification

Key features	
Coverage	6 350 x 2 100 mm (roof)
Hydraulic rock drill - drilling line - bolting line	 RD315, 15 kW (OMS100) RD315, 15 kW (OMS125)
Drill feed	SBH, 5 to 10 ft
Boom	B26XLB
T-section width in turning	4 890 mm (SBH8/B26XLB)
Transport width	2 020 mm
Transport height (canopy)	2 140 mm / 3 100 mm
Transport length	12 020 mm (with SBH8)
Total weight	15 000 - 18 000 kg depending on options

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 RD315 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). availability and productivity by reducing downtime during bit changes. Additionally, the system offers enhanced flexibility by accommodating different bit sizes, making it adaptable to various operational requirements.

SANDVIK

Technical Specification

Hydraulic rock drill

Type of rock drill	RD315 (TS2-505) Drilling line	RD315 (TS2-505) Bolting line
Percussion power	15 kW	15 kW
Percussion pressure	Max. 180 bar	Max. 180 bar
Percussion rate	95 Hz	95 Hz
Rotation speed	Max. 530 rpm (100 cc)	Max. 430 rpm (125 cc)
Rotation torque	Max. 340 Nm (100 cc)	Max. 420 Nm (125 cc)
Hole size	33 - 43 mm (1"$^{9}/_{64}$ - 1"$^{11}/_{16}$)	_
Recommended rod	R32 - HEX25 - R25	_
Shank adapter	R32 female	R32 male
Weight	126 kg	126 kg

Bolting head

Type of bolting head (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	2 685	2 885	3 185	3 505	4 115
Total length (B) RD314 or RHR50 drilling RHR50 bolting	mm	2 905	3 225	3 525	3 845	4 455
Total length (B) RD315 drilling RD315 or RHR50 bolting	mm	2 965	3 285	3 585	3 905	4 515
*) Recommended operating height	mm	3 165	3 485	3 785	4105	4 715
**)Total weight	kg	1 305	1 335	1 365	1 405	1 445

Dimensions +0 mm to + 5 mm
**)Total length + 100 mm clearance on each side*
***)The weights are theoretical and given for information*
Dimensions and weights are for a bolting head equipped

Boom

Type of boom	B26XLB (TS2-207) Standard	B26B (TS2-206) Optional
Boom extension	1 700 mm	1 200 mm
Roll-over angle	360°	360°
Boom weight, net	1 500 kg	1 350 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
Filling pump for hydraulic oil	Manual
Cooler for hydraulic oil	OW30 oil-to-water (1 x 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.)
Boom movements prevention switch	2 x switches (on each side)

Electric system

Standard voltage	380 - 440 V (± 10%), at 50 or 60 Hz
Total installed power	70 kW
Main switch gear	MSE 5 Streamline
IP classification	Specification TS2-132
Starting method	Star Delta 380 V - 575 V
Automatic cable reel	TCR1
Cable reel controls	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 working lights (combined working and driving)	4 x 50 W LED (4 200 lm, 6 000 K)
Rear working 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 flushing

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

Operator's safety canopy

Canopy certification	FOPS/ROPS (ISO 3449)
Standing height	2 930 to 3 100 mm
Seated operations Cabin certification	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

Technical Specification

Carrier

Type of carrier	NC5-17
Steering system	Frame steering
Carrier articulation	Up to ± 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	SAHR fail safe type wet disc 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 recommended	Diesel EN590 / HVO EN15940
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	Backward alarm
Knowledge Box™	Connectivity solution (TS2-535) My Sandvik insight readiness (TS2-390)
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 USB key of manuals (PDF files) 1 x Online Parts manuals (MySandvik)
Underground standard working environment	0°C < Mine air T° < 40°C Humidity < 85% -1000 m < Altitude < 4000 m When applicable : 0° < Water flushing T° < 30°C 5 < Flushing or mine water pH < 10 Flushing water salt concentration < 2%

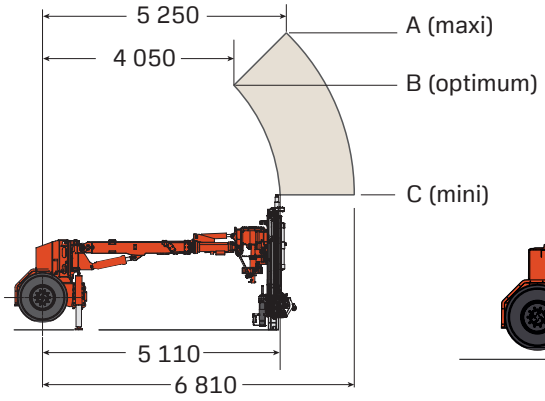
Optional features and packages

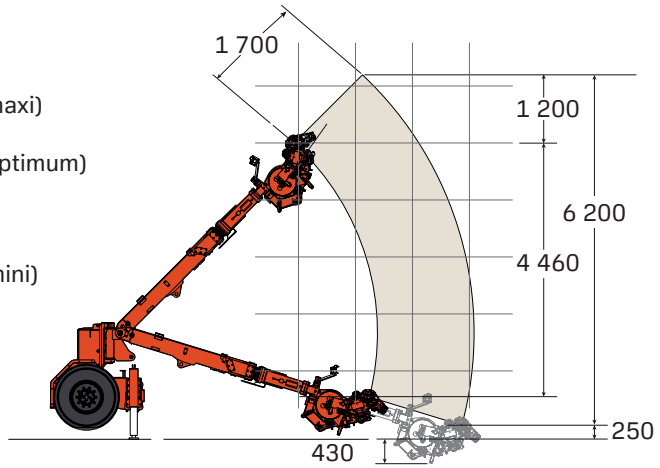
Rock drill	
Type of rock drill	RD314 instead of RD315 (drilling line)
*RHR40 or RHR50 rotary drill	Instead of RD315 (drilling line)
Bolting option	
*Bolting alternatives	GCR, GCC, WI, S, MD, MDX, M
2 or 3 bolt lengths carousel	SBH10 (8' and 7'), SBH8 (7' and 6'), SBH7 (6'), SBH6 (5')
Screen handler	On the bolting head (TS2-355) with hooks for mesh on carrier side
Bolting head oiler	For GCR and GCC system (TS2-291)
Rod retainer on SBH	For manual extension drilling with optional rod handler
Boom	
*Type of boom	B26B instead of B26XLB
Wear plates boom	Easy adjustable on B26 boom
Boom suspension system	Specification TS15-232
Electric system	
Ground fault and overcurrent protection	VYK (N/A USC package) 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	Ø32 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)
Automatic system	Carrier (TS2-463)
Operator's safety 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	6 nozzles, Ansul (TS2-460)
Auto. fire suppression system	Sandvik Eclipse™ (TS2-461)
Carrier	
*Foam filled tires	4 pcs
Brake release	Manual hand pump
*Knowledge Box™	My Sandvik productivity readiness (TS2-390)
Wheel chocks and holders	2 x stop blocks (1 x set)
Extra items	
Berg plug and socket	250 A
Spare rock drill	RD315, RD314
Filling device for accumulators	Specification TS2-430
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)
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)
*Package: High ambient temperature	Oil viscosity 100
40°C < Mine air T° < 55°C	Oil/Water cooler, mine water supply CT28 limited to 1,2 m³ / min

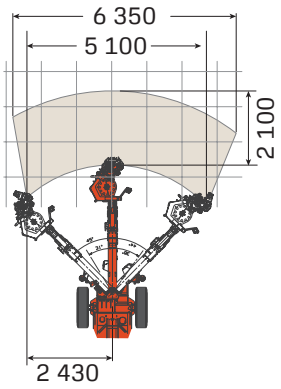
**) Replaces standard feature*

Technical drawings

All dimensions in mm

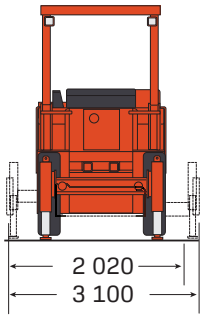


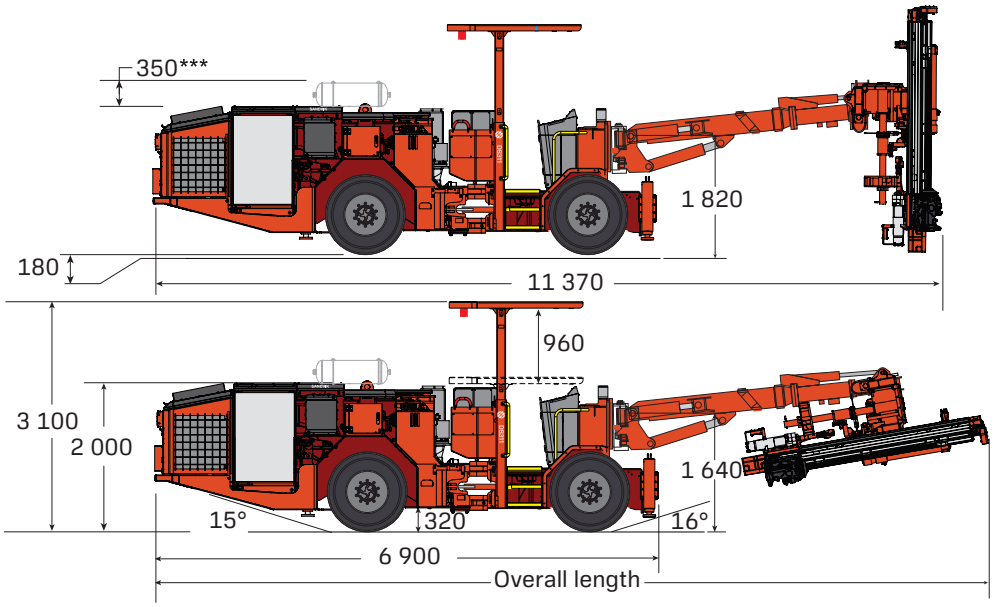




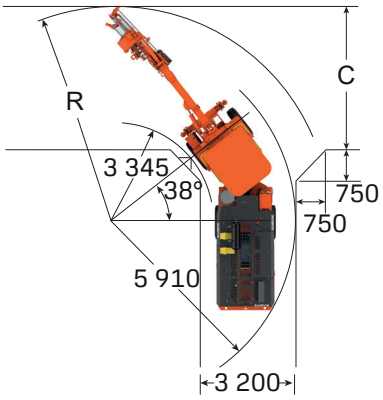
Coverage
at optimum height (B)

			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*



		External radius (R)	Cornering (C)
DS311 (SBH5, B26XLB)	mm	7 195	4 485
DS311 (SBH6, B26XLB)	mm	7 360	4 650
DS311 (SBH7, B26XLB)	mm	7 410	4 700
DS311 (SBH8, B26XLB)	mm	7 600	4 890
DS311 (SBH10, B26XLB)	mm	7 860	5 150
DS311 (SBH5, B26B)	mm	6 800	4 165
DS311 (SBH6, B26B)	mm	6 970	4 330
DS311 (SBH7, B26B)	mm	7 020	4 380
DS311 (SBH8, B26B)	mm	7 210	4 570
DS311 (SBH10, B26B)	mm	7 465	4 830

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