



DS512i ROCK SUPPORT

TECHNICAL SPECIFICATION

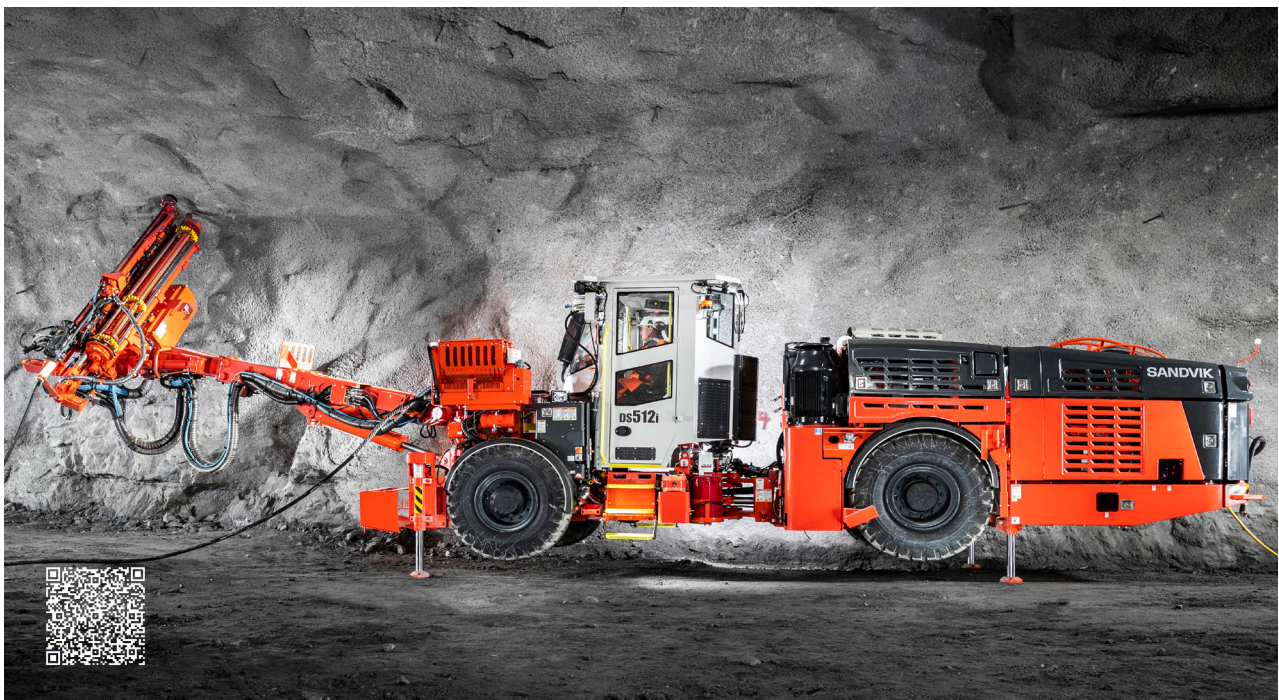
Sandvik DS512i is a new highly automated and productivity rock bolting rig for underground mining operations and civil construction tunneling.

Upgraded bolting head with different bolt lengths enables wider bolt selection for all customers. Automatic resin shooting and cement mixing system ensure high quality rock reinforcement process.

Like all Sandvik underground drills, Sandvik DS512i benefits from a design philosophy that focuses on the operator. The complete new cabin is state of the art what comes to noise isolation and ergonomic.

KEY FEATURES

Optimum bolting coverage	5 m x 5 m
Hydraulic rock drill	1 x RD314, 14 kW
Bolting head	1 x BHi
Boom	1 x SB120iS
Automation package	Silver
Bolt length	From 1.5 m to 6 m (5' to 20')
Turning width (T-section)	4 600 mm
Transport width	3 100 mm
Transport / drilling height	3 050 mm / 3 315 mm
Transport length	14 220 mm
Total weight	29 000 kg depending on options



1. SANDVIK DS512i - ROCK SUPPORT

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	BHi (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	SB120iS (TS2-514)
Boom extension	1 900 mm
Boom weight, net	3 000 kg
Roll-over angle	360°

HYDRAULIC SYSTEM

Powerpack	HPP355 (1 x 55 kW)
Filtration size (pressure / return)	20 µ / 10 µ
Oil tank volume	270 liters
Oil tank filling pump	Electric
Oil cooler (water actuated)	OW30 oil-to-water (1 x 30 kW)

DRILLING CONTROL SYSTEM

Control system type	SICA
Drilling control modes	Intelligent torque control / Feed percussion / manual
Upgradeable automation levels	
Comprehensive diagnostic system	
Electronic joystick controls	
15" full color touch screen	
Cable kit for spare part programming	
Safety lock for movement prevention	2 switches

ELECTRICAL SYSTEM

Standard voltage	380 – 1 000 V (±10%)
Total installed power	70 - 80 kW
Main switch gear	MSE10
IP classification	Specification TS2-132
Starting method	Direct on line 380 V - 1 000 V
Automatic cable reel	TCR4EC with spooling system
Cable reel control	Operator station and remote control at rear machine
Front lights	6 x 50 W LED (24V) >125lx, 20 000 lm; 6 000 k
Rear lights	2 x 50 W LED (24V) and 2 x 17 W LED (24V) 8 000 lm; 6 000 k
Remote search light	1 x 50 W LED (24V)
Parking rear brake / park lights	2 x Red LED
Stair and service lights	LED (24 V)
Amber flashing light	LED (24 V)
Electric outlet on carrier	1 x 110 V or 230 V (16A)
Electric quality monitoring	Voltage, Amperage, Power, Pf Energy, Phase-sequence
Motor protection	Intelligent control with power maximization
Extra low voltage supply	Continuous 80 A (27 VDC) with battery back-up and management

AIR AND WATER SYSTEM

Flushing of holes	By Water
Water booster pump type	WBP2
Water pump capacity	100 l/min
Water pump inlet pressure	2 bar (Min.)
Flushing water pressure	10 - 15 bar
Shank lubrication device	SLU-1 (Air / oil mist)
Air compressor	CTN10 (1.0 m³/min at 7 bar)
Compressed air outlet	Quick coupling
Oil consumption	150 - 250 g/h
Air consumption	250 - 350 l/min

OPERATOR'S SAFETY CABIN

Safety cabin certification	FOPS / ROPS (ISO 3449 / 3471)
Operation	Seated tramming Standing and seated drilling
Sound pressure level	According to EN791, ISO4872, ISO1120. Operator station: 69 db(A)
Vibration level	According to EN791, ISO2631-1
Seat	Fully adjustable seat (tramming and drilling)
Optimized dust level control	via air circulation
Air conditioning	EU6/7 filtering capacity
Cabin heating	During tramming and drilling
Electricity outlets	1 x 24 V, 1 x 12 V and CD player readiness
Stairs and indoors lights	LED
Audio player	CD / MP3 player with radio and loudspeakers
Boot washer	At each cabin entrance
Safety laminated acoustic windows	

CARRIER

Type of carrier	C400D (frame-steered)
Carrier articulation	± 35°
Rear axle oscillation	± 8°
Ground clearance	330 mm
Diesel engine	B4.5, 119 kW, Tier 3, Stage IIIA
Transmission	Hydrostatic
Axles	Dana Spicer
Tires	14.00–24 PR28
Brakes	SAHR type, fail-safe wet disc brakes
Tramming speed	12 km/h (limited)
Gradeability / sideways tilt	Max.15° / 5°
Fuel tank	100 liters
Hydraulic jacks	2 x SJ500 (front) 2 x SJ600 (rear)
Brake release	Manual hand pump
Wheel chocks and holders	2 Sets
Centralized greasing points	Specification TS2-463
Manual greasing system	Specification TS2-463
Hand held fire extinguisher	1 x 7.7 or 9 kg (type ABC)
Tramming alarm	Standard
Tramming camera	Rear and side
Wheel chocks and holders	2 pcs
Toolboxes and first aid kit	
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	SB90RSH dedicated boom
Cement dust collector	Above the mixer
Bolt storage	On right side, or front module
Bolting head oiler	Recommended with BCS system
Cement transfer screw	
Roll-mesh manipulator	

Hydraulic system

Vacuum pump	For hydraulic system
By pass oil filter	

Drilling control system

Access detector	Mandatory in Europe (TS2-211)
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Air and water system

*Air compressor	CT28 (2.8 m³/min, at 7 bar)
Compressed air outlet	Quick coupling
Water hose reel and hose	THR2.5E with Ø32 mm (1 ½"), 100 m

OPTIONAL FEATURES AND PACKAGES

Cleaning system

LP system with reel	Up to 15 bar (TS2-343)
HP system with reel	Up to 180 bar (TS2-343)
Bolting module continuous washing system	Remote controlled

Greasing systems

Manual system	Specification TS2-463
Automatic system	Lincoln (complete)

Electric system

Voltage option	1 000 V (50 / 60 Hz) with DOL starter
Multivoltage basic	380 – 440 V, 690 V 50 or 60 Hz
Multivoltage pro	380 – 1 000 V, 50 or 60 Hz
*Electric cables	Specification TS2-121
Ground fault and overcurrent protection	VYK
Dewatering pump outlet	8 kW, Site voltage 380 - 690 V
Current draw reducer unit	
Remote controlled spot lights	2 pcs
Indicator lights for jacks	Up and down
Powerpack tramming	For transfers less than 25 m (N/A with BCS cement option)
Earth continuity control	1 wire pilot circuit with remote reset / disconnect
Battery jump start	Optional

Operator's safety cabin

Tilttable cabin	15° to improve operator's comfort
Cabin safety grill	Lifting mechanism
Cabin heating	During tramming and drilling

Fire suppression system

Spare hand held 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

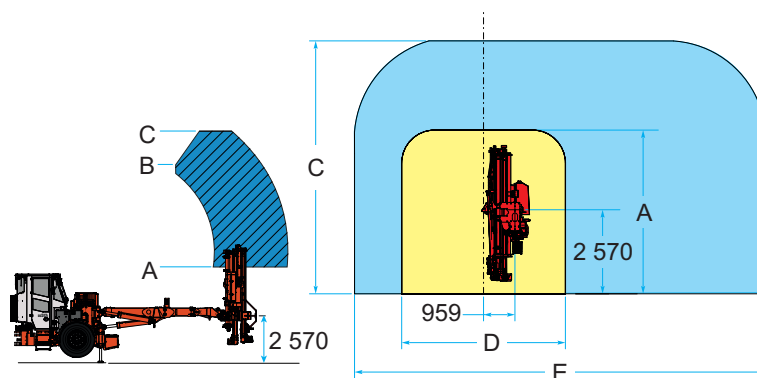
Reduced tramming speed	3 rd gear lockout
*Diesel engine	B6.7, 205 kW, Tier4F B6.7, 194 kW, Stage V B4.5, 121 kW, Stage V
*Foam filled tires	4 pcs
Fast filling system	Complete
Rod rack	On carrier side (4 rods)

Extra items

Spare rock drill	RD314
Spare wheel assembly	Standard or foam filled tire
Special tools for rock drill	Field tool set (TS2-119) Complete tool set (TS2-118)
Documentation	Extra, Catbase, Link one manuals
Warranty extension	One year (excl. Kazakhstan)

**) Replaces standard feature*

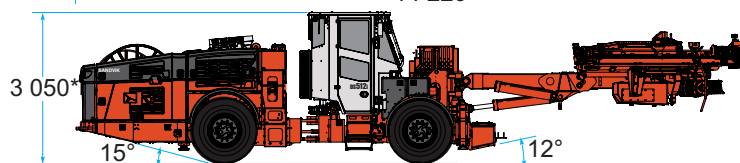
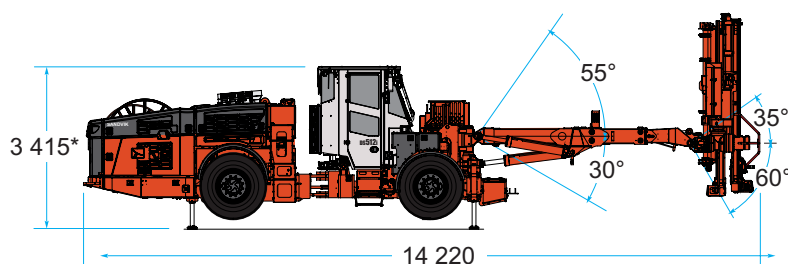
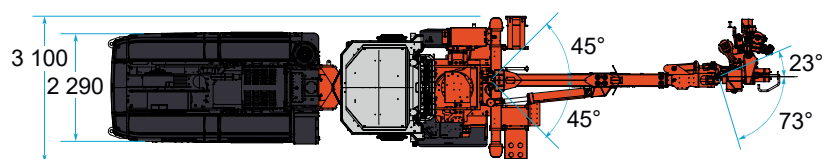
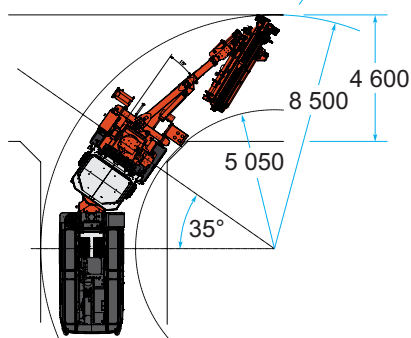
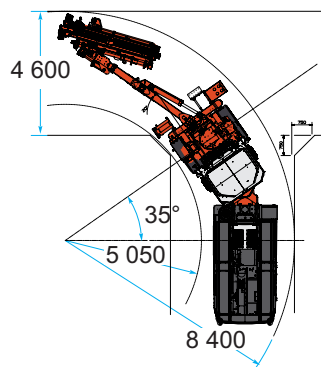
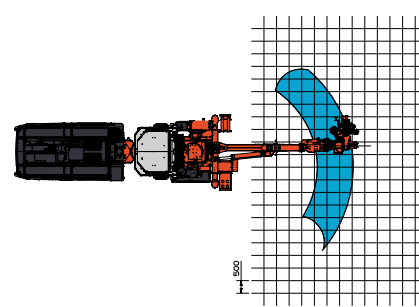
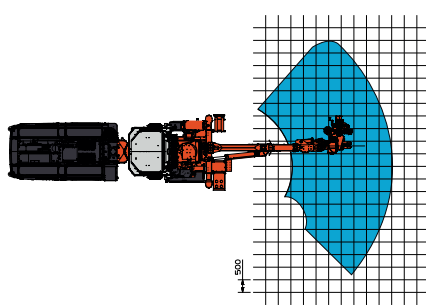
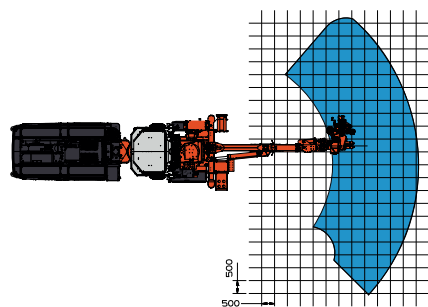
Bolting head	Minimum operating height and width (A;D)	Optimum operating height (B)	Maximum operating height (C)	Maximum width (E)
BH15	2 930	8 320	10 260	12 460
BH18	3 150	8 320	10 260	12 460
BH22	3 650	8 320	10 260	12 460
BH24	3 900	8 780	10 720	13 380
BH27	4 110	8 780	10 720	13 380
BH30	4 450	8 780	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 C



All dimensions in mm
* Add 100 mm height with tilting option

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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