



DD322i DEVELOPMENT DRILL



ROCKTECHNOLOGY.SANDVIK

INTELLIGENT TWIN BOOM IN MEDIUM SECTION

Sandvik DD322i is a compact sized twin boom drill, highly automated to provide a high level of performance, accuracy and reliability for underground development drilling and small scale tunneling.

Sandvik DD322i has a new carrier and new design; this rig can tram in small headings, in tight corners and intersections. The Boom Control While Trimming (BCWT) option allows the operator to simultaneously control the two booms while trimming, ensuring improved control when moving the drill.

The new SB55i booms with two roll-overs ensure improved drilling performance and accuracy as well as high flexibility to drill crosscut and bolt holes. The drill is equipped with features such as boom collision avoidance system and optional tele remote drilling capabilities to make operations underground safer.



MAIN BENEFITS

HIGH LEVEL AUTOMATION

Sandvik DD322i has scalable automation options, from one rod automation, angles and hole depth measurement, and reporting drill plan visualization, up to full face automation and tele remote drilling.

The intelligent torque optimized drilling control system helps to minimize hole deviation during drilling, reduce jammings and maximize the tool life consistently.

18% increase in face drilling coverage with the 1.4 m boom zoom extension

48% bigger side coverage for cross cuttings with double roll-over SB55i boom

Wide range of automatic drilling functions ensuring drilling accuracy for high pull out and low overbreak

More than 55% additional cabin visibility thanks to larger windows and glass doors

Optimized intelligent torque drilling control system

Readiness for tele remote drilling & automatic bit changing

Modern and ergonomic cabin for maximum operator comfort with reduced noise level





INTELLIGENT BOOM



The SB55i instrumented boom ensures the precise and fast positioning of drill feed with electronic parallelism and instrumentation for hole angle measurements. Hole angles for face drilling, vertical and inclined holes can easily be visualized on the colored screen.



LOW EMISSIONS DIESEL ENGINE



To improve the underground working conditions, DD322i can be equipped with engines certified to the more restrictive environmental norms, such as to Tier 4F, Stage V certification



OPTIMIZED WORKING ENVIRONMENT



Modern and ergonomic cabin for maximum operator comfort with improved visibility and reduced noise level



SANDVIK 365 PARTS & SERVICES

PROUDLY KEEPING YOU ON TRACK!

Sandvik 365 Parts & Services offers a variety of possibilities to enhance your Sandvik DD322i drill's performance. As an OEM, we provide the best-suited choices to preserve your machine's high performance throughout its lifetime. These consist of highly skilled service specialists supporting you 365 days a year, all using Sandvik Genuine parts and components complemented by a range of robust tools. In addition, you get to enjoy the benefits of advanced digital services and global infrastructure dedicated to keep your Sandvik fleet on track.

TECHNICAL SPECIFICATION

HYDRAULIC ROCK DRILL

Type of rock drill	RD520 (TS2-235) Standard	RDX5 (TS2-433) Optional
Percussion power	20 kW	20 kW
Percussion pressure	Max. 220 bar	Max. 220 bar
Percussion rate	74 Hz	67 Hz
Stabilizer	Hydraulic	Hydraulic
Rotation speed (100 cc)	Max. 340 rpm	Max. 330 rpm
Rotation torque (100 cc)	520 Nm	545 Nm
Hole size (drifting)	43 - 64 mm	43 - 64 mm
Hole size (cut hole)	76 - 127 mm	76 - 127 mm
Recommended rod	T38 - R32 - H35 T38 - R35 - R39	T38 - R32 - H35 T38 - R35 - R39
Shank adapter (male)	T38	T38
Weight	225 kg	210 kg
Length	1 010 mm	1 100 mm
Profile height	90 mm	90 mm

DRILLING FEED

Type of feed	TF5i-12' Standard	TF5i-14' Optional	TF5i-16' Optional	TF5i-18' Optional
Feed force (Max.)	25 kN	25 kN	25 kN	25 kN
Feed extension	1 650 mm	1 650 mm	1 650 mm	1 650 mm
Total length	5 355 mm	5 965 mm	6 575 mm	7 185 mm
Hole length	3 440 mm	4 050 mm	4 660 mm	5 270 mm
Rod length	3 700 mm	4 305 mm	4 915 mm	5 525 mm
Net weight	420 kg	450 kg	480 kg	540 kg

BOOM

Type of boom	SB55i (TS2-520)
Parallel coverage	55.7 m ²
Parallelism	Electric
Boom extension	1 400 mm
Boom weight, net	2 500 kg
Roll-over angle	360°
Bolt hole drilling	Yes

HYDRAULIC SYSTEM

Powerpack	HPP555 (2 x 55 kW)
Percussion and feed pump	112 cc
Compressor and WBP pump	45 cc
Rotation pump	33 cc
Air conditioning / combi-cooler pump	41 cc / 33 cc
Filtration (pressure / return)	20 µ / 10 µ
Oil tank volume	173 liters, (max. level sight glass 145 liters)
Oil tank filling pump	Electric
Cooler for hydraulic oil	Oil-to-air combicooler for tramming and drilling

DRILLING CONTROL SYSTEM

Control system type	SICA
Drilling control modes	Advanced 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
Control system SW support package	First year

ELECTRICAL SYSTEM

Standard voltage	380 - 690 V (±10%)
Total installed power	110 - 160 kW
Main switch gear	MSE20
IP classification	Specification TS2-132
Starting method	Direct on line 380 V - 1 000 V
Automatic cable reel	TCR3CD 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
Parking rear brake / park lights	2 x Red LED
Stair and service lights	2 x LED (24 V)
Amber flashing light	2 x LED (24 V)
Electric quality monitoring	Voltage, Amperage, Power, Pf Energy, Phase-sequence
Motor protection	Intelligent control with power maxi- mization
Extra low voltage supply	Continuous 80 A (27 VDC) with bat- tery back-up and management

AIR AND WATER SYSTEM

Flushing of holes	Water flushing or air mist flushing
Flushing flow control	2 booms
Water booster pump	WBP2 HP
Water pump capacity	167 l/min
Inlet pressure	2 - 7 bar
Flushing water pressure	10 - 15 bar
Shank lubrication device	SLU2 (air / oil mist)
Air compressor	2.4 m ³ /min (adjustable 0.7 to 2.4 m ³)
Air and water outlets	Quick coupling
Rock drill oil consumption	180 - 250 g/h
Rock drill air consumption	250 - 350 l/min

OPERATOR'S SAFETY CABIN

Safety cabin certification	FOPS / ROPS (ISO3449 / 3471)
Operation	Seated tramming Standing and seated drilling
Sound pressure level	According to EN16228, ISO1120. Operator station: 69 db(A)
Vibration level	According to EN16228, ISO2631-1 ISO5349-1, ISO5349-2
Seat	Fully adjustable seat (tramming and drilling)
Optimized dust level control via air circulation	
Air conditioning	EU6/7 filtering capacity
Electricity outlets	1 x 12 VDC, 2 x USB and CD player readiness
Auxiliary outlets (single phase)	1 x 110V (15A), 1 x 230V (16A), (N/A AUS package)
Audio system	MP3 player, radio, and bluetooth
Boot washer	At each cabin entrance
Safety grill	Windshield
Safety laminated acoustic windows	

CARRIER

Type of carrier	C300 (frame-steered)
Carrier articulation	± 41°
Rear axle oscillation	± 8°
Ground clearance	300 mm
Diesel engine	TCD3.6, 100 kW, Tier 3, Stage IIIA
Transmission	Hydrostatic
Axles	Dana Spicer
Tires	12.00–20
Brakes	SAHR type, fail-safe wet disc brakes
Tramming speed	12 km/h (limited)
Gradeability / sideways tilt	Max.15° / 5° (according to EN 16228-2)
Fuel tank	150 liters
Hydraulic jacks	2 x SJ500 (front), 2 x SJ600 (rear)
Wheel chocks and holders	2 Sets
Centralized greasing points	Specification (TS2-463)
Hand held fire extinguisher	1 x 6 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

AUTOMATION GOLD PACKAGE (STANDARD)

SB55i boom with electronic parallel holding
Display of feed angles, drilling depth and penetration rate
Presetable angle and depth indication for reference hole
Counter and recommended change intervals for bits and tools
Drill plan visualization onboard
Display of drill bit location vs. given drill plan
iSURE I Basic (Drill plan design)
Drill rig suitable with various navigation methods
Advanced MWD data collection with analyses tool (iSure)
DrillConnect mobile application : Connectivity through Knowledge box™ for easy data transfer to and from the rig

AUTOMATION PLATINUM PACKAGE (OPTIONAL)

Automation Gold package content
SB55i boom with electronic parallel holding
Hole end correction from different start point
Semi-automatic boom movements
Automatic boom movements (full face automation)
Boom collision avoidance system (separate option)

OPTIONAL FEATURES AND PACKAGES
Rock drill

*Type of rock drill	RDX5 (OMS100) instead of RD520
Power extractor	for RD520 or RDX5

Feed

*Feed length	14', 16', 18'
*Telescopic feed	TFX6/12, TFX8/14
Rod retainer	TRR1 incl. safety wire, add 35 mm length of the feed
Drill bit changer	6 x std bits (incl. SCR rod retainer)

Hydraulic system

Type of powerpack	HPP575 (2 x 75kW)
Additional liquid type	Heat exchanger
Vacuum pump	For hydraulic system
By pass oil filter	

OPTIONAL FEATURES AND PACKAGES
Drilling control system

Boom collision avoidance system	
Boom controls while tramming	
Data transfer WLAN incl. remote GUI	
Access detector and protector	Mandatory in Europe (TS2-211)

Electric system

*Optional voltage	1 000 V (50 / 60 Hz) with DOL starter
*Electric cables	Specification TS2-121
Ground fault and overcurrent protection	VYK (excluding CAN/USA)
Dewatering pump outlet (8 kW)	Site voltage 380-690 V, 50/60 Hz 400V, 50/60 Hz (+ transformer) 1 000 V, 50 Hz
Current reducer unit	
Remote controlled spot lights	2 pcs
Indicator lights	For jacks up / down
Earth continuity control	1 wire pilot circuit with remote reset / disconnect
Auxiliary outlet (single phase)	2 x 110V (15A), 2 x 230V (16A)
Battery jump start	Optional
Indicator light for boom movement prevention switch status	2 x on both sides, 1 x inside cabin (green or red depending status)

Air and water system

Air mist flushing kit	IP5 and flow control for air supply
*End of hole air flushing	
Water hose reel with water hose	THR2.5E with 38 mm (1 ½"), 65 m

Cleaning system

HP system with reel	Up to 180 bar (TS2-343)
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Greasing systems

Automatic system	Lincoln (complete), (TS2-463)
Manual greasing system	Battery operated grease gun

Operator's safety cabin

*Low height cabin with safety grill	FOPS/ROPS, Height 2 620 mm
Cabin heating	During tramming and drilling
Tramming cameras	Rear and side

Fire suppression system

Spare hand held fire extinguisher	1 x 6 or 9 kg (type ABC)
Manual or automatic system	Ansul, 4+4 nozzles (4 lvs, 4 dry)
Automatic system	Sandvik Eclipse™ (TS2-461)

Carrier

*Diesel engine	TCD3.6, 105 kW, Stage V
*Foam filled tires	4 pcs
Fast filling system	Complete
Rod rack	On carrier side (Max. 200 kg)

Extra items

Additional dry batteries	2 x 12V with booster cables
Berg plug / socket	250 A
Spare rock drill	RD520, RDX5
Spare wheel assembly	12.00–20 or foam filled tire
Warranty extension	One year (excl. Kazakhstan)
Special tools for rock drill	Field tool set, complete tool set
Documentation	Extra, Catbase, Link one manuals
Total station	Calibration and measurement
iSURE®	iSURE II Plus annual license (Advanced drill and blast design including round reports) iSURE III Premium annual license (MWD including pull out analyses) iSURE IV Pro annual license (Tunnel development KPI's)
Packages: Country specific option	AUS,US/CAN, SAS, EU, KOR
Packages: Automation	Platinum
Packages: Extreme environment	Specification TS2-549
Package:Telere remote drilling	Specification TS2-422

**) Replaces standard feature*

MAIN DIMENSIONS

The dimensions are indicative only - All dimensions in mm

TELEREMOTE DRILLING PACKAGE (TS2-422)

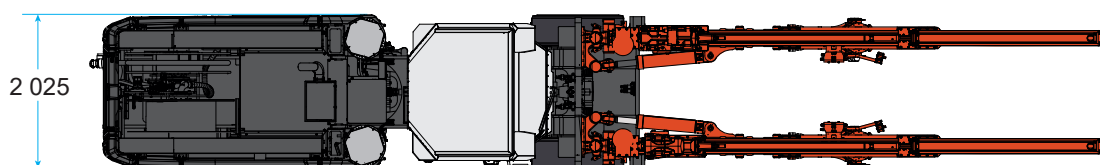
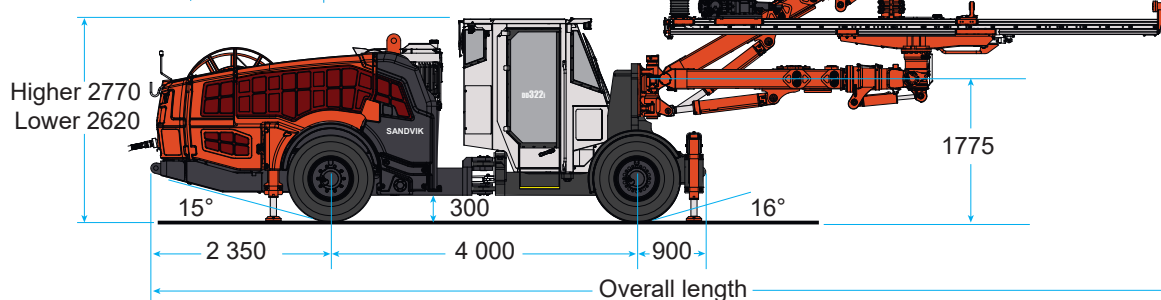
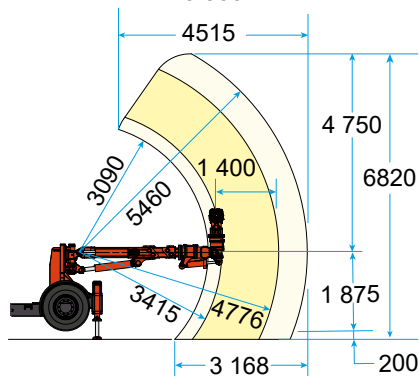
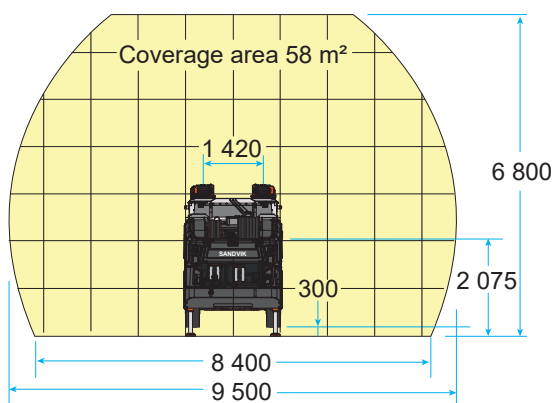
GUI touch screen
Start / Stop of automation
Manual drilling and boom controls
Control of PTZ cameras
Control of spot lights (separate option)
Sending drilling related data
Unit condition monitoring via GUI screen
Audio and video stream from the unit

EXTREME ENVIRONMENT PACKAGES (TS2-549)

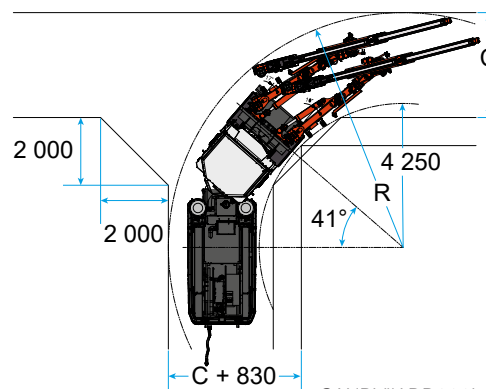
High temperature package
Extreme high temperature package
Anti-freezing package
High-altitude package
Harsh water flushing package
Harsh water environment package

KEY FEATURES

Coverage	58 m ² (6.8 x 9.5 m) 19.3 m ² (cross cutting)
Drift size class (H x W)	3 500 mm x 3 500 mm
Turning width (T-section)	2 850 mm
Transport width	2 025 mm
Transport height	2 620 mm / 2 770 mm
Transport length	12 240 mm
Total weight	21 500 kg depending on options



Type of type	Radius (R)	T-cross (C)
TF5i-12'	6 755 mm	2 850 mm
TF5i-14'	6 830 mm	2 925 mm
TF5i-16'	7 045 mm	3 140 mm
TF5i-18'	7 185 mm	3 280 mm
TFX6/12	6 795 mm	2 890 mm
TFX8/14	6 830 mm	2 925 mm



SANDVIK DD322i

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Please contact a Sandvik representative for clarification on specifications and options.

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