

DD212i Development drill

Technical Specification





Redefining limits with advanced technology

Key features

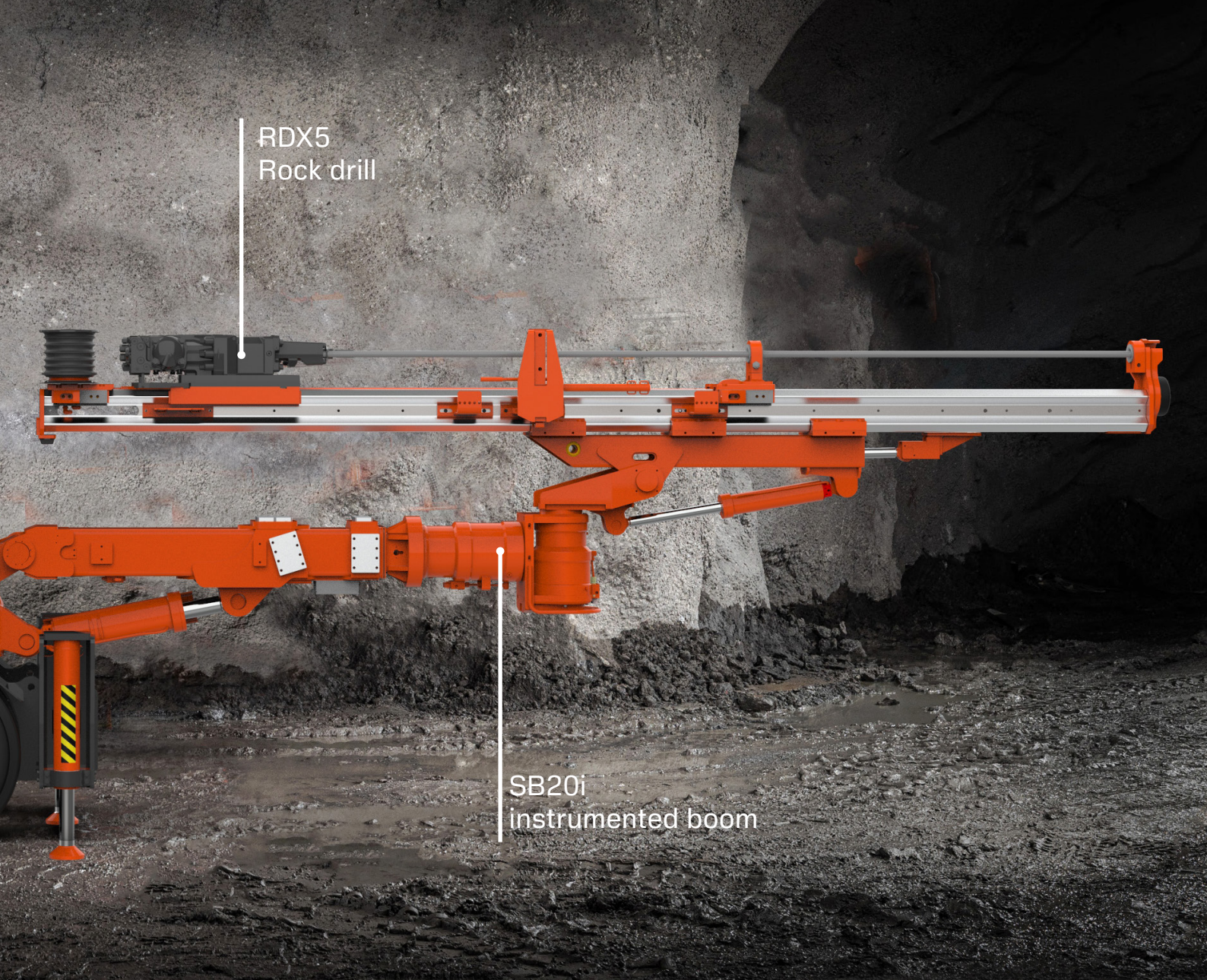
Coverage	26 m ² auto-parallel
Drift size class (H x W)	2 500 mm x 2 000 mm
Hydraulic rock drill	RDX5
Drill feed	TF500, 10 - 14 ft CFX6/12
Boom	SB20i
Automation package	Silver (option), Gold (contact factory)
Transport width	1 400 mm
Transport height	2 550 mm
Transport length	10 510 mm (TF512)
Total weight	12 000 kg depending on options

Sandvik DD212i is an intelligent and versatile single-boom automated drill for tunneling and mining development in narrow vein to medium size drifts. Its advanced platform ensures an increased productivity resulting in producing more tons with maximized profitability.

Sandvik DD212i is equipped with Sandvik Intelligent Control System Architecture (SICA), a well-proven and commonly used computerized control system in Sandvik drill rigs. DD212i also comes with our powerful and reliable rock drills as standard. The combination of SICA controls, DD212i Digital Driller training simulator, and spare parts standardization ensures easy integration into your production process.

DD212i comes with optional scalable automation functions to maximize profitability through more tons per blast and more blasts per day. Your cost per ton can be reduced through; improved drilling quality, minimizing over-break, maximizing pull out, comprehensive drill plan designs, data reporting, and analyzing tools for process optimization.

The versatile SB20i boom with dual roll overs and one meter boom extension, combined with compact telescopic drilling modules, provides high ability and accuracy to drill faces, crosscuts, cable, and bolt holes in a confined space. Its large coverage of 26 m² with electronic parallelism offer the flexibility to work in bigger tunnel sections.



RDX5
Rock drill

SB20i
instrumented boom

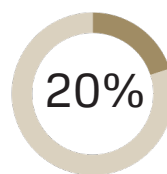
Main benefits

Low total cost of ownership

Sandvik DD212i has two automation levels, from one rod automation to feed angles, hole depth measurement, and reference hole and penetration reporting.

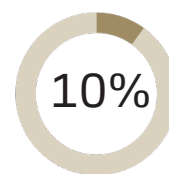
Sandvik DD212i is a compact drill solution enabling mines to open smaller tunnel sections leading to superior pull-out ratio.

The intelligent control system with torque optimized drilling helps to minimize hole deviation during drilling, reducing jamming and maximizing the tool life consistently.



Improved penetration rate

Up to drilling power with 55 kW allowing full performance of RDX5



Better pull out

With Silver and Gold package Drilling instrumentation with onboard drill plan visualizer



Operator safety & comfort

With Enclosed cabin with AC and heating system reducing operator exposure to noise and dust



Intelligent control system

The SICA intelligent drilling control system increase drilling performance and reduces the wear on both rock drill and rock tools for an extended lifetime. The incorporated automatic functions allow the operator to concentrate on safe, precise and productive operations.



Instrumented boom

The SB20i instrumented boom ensures precise and fast positioning of the drill feed and tool, with electronic parallelism and instrumentation for hole angle measurements. Hole angles for face drilling, vertical and inclined holes can easily be visualized on the screen.



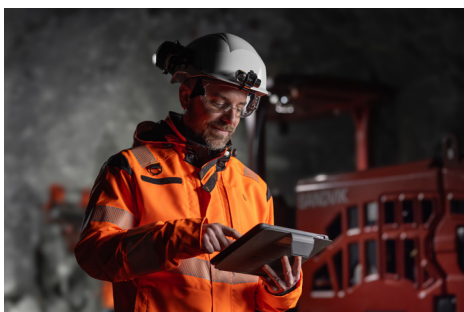
Cabin on narrow vein range

Modern, ergonomic and certified FOPS / ROPS cabin for maximum operator safety and comfort offering high visibility, reduced dust and noise level.



Digital Driller™

Through simulation, operators develop skills fully from basic boom movements and manual drilling to full automated drilling operations using various training scenarios.



Sandvik DrillConnect

Readiness for Sandvik DrillConnect mobile application for improved data management and enhanced maintenance, and My Sandvik digital services.



Drill plan visualization

Gold package (option) is delivered with your drill rigs significantly improves drilling accuracy. Therefore, it also decreases the amount of over and under excavation.



Sandvik 365 Parts and Services

Proudly keeping you on track!

Sandvik 365 Parts & Services offer a variety of possibilities to enhance your Sandvik DD212i 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 a global infrastructure dedicated to keeping your Sandvik fleet on track.

Technical Specification

Hydraulic rock drill

Type of rock drill	RDX5 (TS2-433)
Percussion power	20 kW
Percussion pressure	175 bar
Percussion rate	67 Hz
Rotation speed	Max. 250 rpm (with OMS80)
Rotation torque	400 Nm (with OMS80)
Hole size (drilling)	43 – 64 mm
Hole size (reaming)	76 – 127 mm
Recommended tools	
43 - 45 mm:	T38 – H35 – Alpha® 340
48 - 51 mm:	T38 – H35 – Alpha® 360 T38 – R39 – Alpha® 360
Shank adapter	T38 (male)
Weight	210 kg

Drilling feed

Type of feed	TF500-10' (RDX5) Optional	TF500-12' (RDX5) Standard	TF500-14' (RDX5) Optional	CFX6/12 (RDX5) Optional	CFX6/12 (RD314/ RD315) Optional	CFX-XS (RD314) Optional
Feed force (max.)	25 kN	25 kN	25 kN	23 kN	23 kN	20 kN
Hole length (mm)	2 830	3 440	4 050	1 520 / 3 350	1 587 / 3 417	1 070 / 2 132
Rod length (mm)	3 090	3 700	4 305	1 830 / 3 660	1 830 / 3 660	1 830 / 2 435
Total length (mm)	4 690	5 300	5 910	3 285 / 5 115	2 930 / 4 765	1 965/ 3 035
Net weight (w/o rock drill)	470 kg	500 kg	530 kg	566 kg	527 kg	416 kg

Boom

Type of boom	SB20i (TS2-432) Versatile NV boom
Parallel coverage	26 m² auto-parallel
Parallelism	Electronic automatic
Boom extension	1 000 mm
Feed extension	1 350 mm (TF feed)
Boom swing, left and right	± 30° (limited)
Roll-over angle	360°
Feed swing angle	240°
Boom weight, net	1 550 kg

Hydraulic system

Powerpack	HPP555 (1 x 55 kW, IE3 motors)
Percussion and feed pump	100 cc
Rotation pump	32 cc
HVAC (Heating, Ventilation and air conditioning) pump	26 cc
Filtration size (pressure / return)	20 µ / 10 µ
Oil tank volume	115 liters
Cooler for hydraulic oil	OW30 oil-to-water (30 kW)

Drilling control system

Type of control system	SICA
Drilling control modes	Torque control optimized/ Feed percussion follow up
Upgradeable automation levels	Silver (option), Gold (contact factory)
Comprehensive diagnostic system	
Electronic joystick controls	
12" full color touch screen	
Safety lock for movement prevention	2 x switches
One rod automation	Collaring, all rods drilling, auto-return, flushing, end of hole cleaning and retract

Electric system

Standard voltage	380 – 1 000 V (±10%)
Total installed power	90 kW
Main switch gear	MSE4
IP classification	Specification TS2-132
Starting method	Star delta starter 380 - 575 V Direct on line 600 V - 690 V
Automatic cable reel	CR with six turn indicator light and three turn interlock system
Cable reel control	Operator station (on tramming panel)
Front lights	4 x 50 W LED (24V), (4 200 lm, 6 000 K)
Rear lights	2 x 50 W LED (24V), (4 200 lm, 6 000 K)
Parking rear brake /park lights	1 x Red LED
Stair and service lights	LED (24 V)
Amber flashing light	2 x LED (24 V) for cabin 1 x LED (24 V) for canopy
Battery isolation switch	1 x Lockable (on rear frame) 1 x (operator station)
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 flushing

Flushing of holes	By Water
Water booster pump type	WBP1
Water pump capacity	33 l/min at 15 bar
Water pump inlet pressure	2 - 7 bar
Flushing water pressure	10 - 15 bar
Shank lubrication device	SLU1 (air / oil mist)
Air compressor	1 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)
Safety grill	For standard cabin
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	Adjustable seat (tramming and drilling)
Optimized dust level control via air circulation	
Air conditioning	EU6/7 filtering capacity
Electricity outlets	1 x 12 V and audio player readiness
Safety laminated acoustic windows	

Technical Specification

Carrier

Type of carrier	NV2023 (articulated frame)
Carrier articulation	± 30°
Rear axle oscillation	± 6°
Ground clearance	245 mm
Diesel engine	TCD2.2, 55 kW, Stage III
Transmission	Hydrostatic, automotive
Axles	Dana Spicer 111 dual
Tires	300 x 15, 8.00 - 15
Service brakes	SAHR type, fail safe wet disc brakes ABA brakes
Tramming speed	8.0 km/h (Horizontal) 4,5 km/h (14%=1:7=8°)
Gradeability / sideways tilt	Max.15° / 5° (according to EN 16228-2)
Fuel recommended	Diesel EN590 / HVO EN15940
Fuel tank	73 liters
Hydraulic jacks	2 x telescopic jacks (front) 2 x Vertical jacks (rear)
Centralized greasing points	Carrier only (TS2-463)
Reverse 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 manual (PDF format) 1 x Online Parts manuals

Automation package, Silver level (Option)

Feed angles measurement
Presettable angle and depth indication for reference hole
Drilling depth measurement & drilling speed (penetration rate)
Hole counter

Automation package, Gold level (Option - Contact factory)

All Silver package features
Drill plan visualization onboard
Display of drill bit location vs. given drill plan
iSURE® (Drill plan design / Drill & Blast optimization)
Drill rig suitable for drill bit navigation
Advanced Measure While Drilling (MWD) data collection with analyses tool (iSure)
DrillConnect mobile application : Connectivity through Knowledge box™ for easy data transfer to and from the rig

Optional features and packages

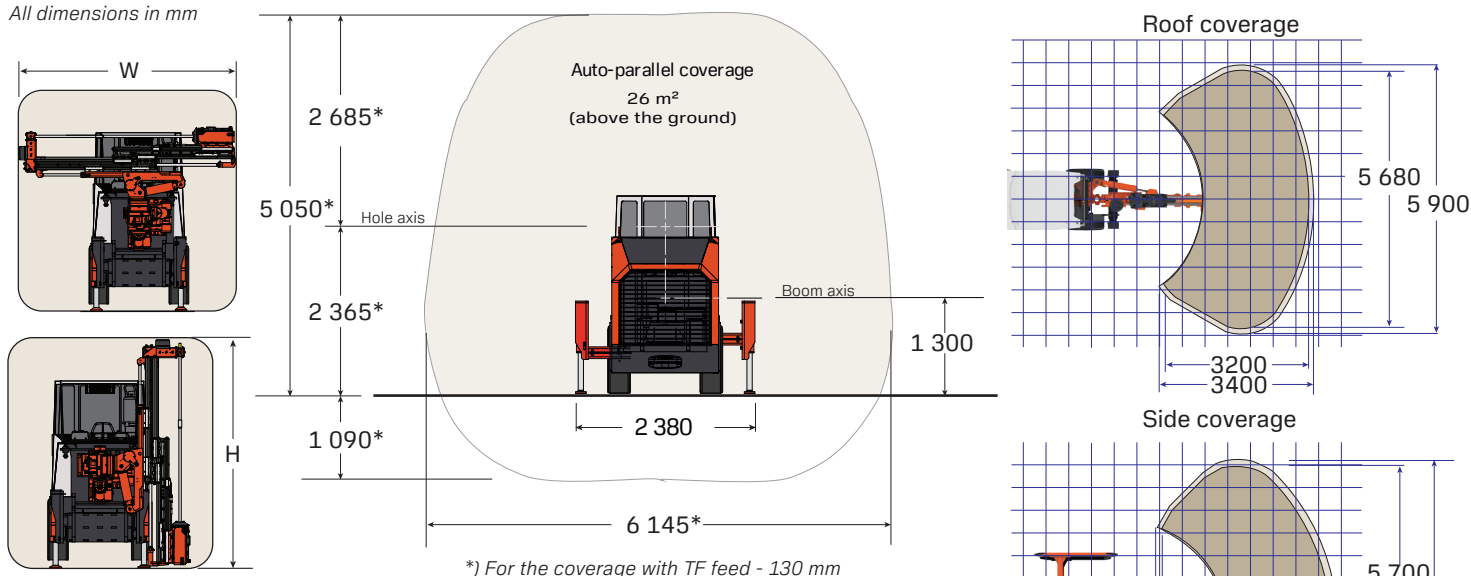
Rock drill	
*Type of rock drill	RD314 or RD315 with CFX-feeds
Feed	
Type of feed	TF510, TF514, CFX6/12, CFX-XS
Rod retainer	For CFX-feed only
Rear stinger (CFX-feed)	600 mm (vertical hoses)
Rod retainer	TRR1 incl. safety wire, add 35 mm length of the feed
Boom	
Boom suspension system	Smooth tramming, improved ergonomic
Hydraulic system	
Filling pump for hydraulic oil	Electric
Cooler for hydraulic oil	OA25 oil-to-air (25 kW)
*Biodegradable hydraulic oil	Condat HFDU 68 flameproof
Drilling control system	
Drill instrument	Hole & drilled meters counter
Drilling control modes	Flushing flow control
Data transfer (USB/WLAN)	Including DrillConnect
Access detector and protector	Mandatory in Europe (TS2-211)

Optional features and packages

Air and water system	
Air mist flushing kit	External air / external or internal water Internal air / external or internal water includes 1 x CT16 or 1x CT28)
Air cleaner for external air	IP5 with air mine connection
1 x 60L air receiver	End of hole flushing (requires CTN16)
Water hose with hooks	32 mm (1¼”), 80 meters
Hooks	2 pcs for air and water hoses
Cleaning system	
HP system with reel	Up to 180 bar (TS2-343)
Greasing systems	
Manual system	Greasing gun and cartridge with hose reel (TS2-463)
Electric system	
*Optional voltage	1 000 V (50 or 60 Hz) with DOL starter
*Electric cable	Specification TS2-121
Ground fault and overcurrent protection	VYK
Battery jump start	Optional
Battery charger	Optional
Cable reel controls	Remote control at rear machine
Amber flashing light	LED
Auxiliary outlet (carrier)	1 x 110 V (15 A) or 1 x 230 V (16 A)
Indicator light	Jacks up
Interlock system	Jacks down
Indicator light for boom movement	2 x on both sides, 1 x drilling panel
prevention switch status	(green or red depending status)
Operator's safety cabin	
*Safety canopy	FOPS/ROPS (ISO 3449/3471)
Safety grill	For canopy or all around canopy
Cabin door alarm and interlock	Tramming stop and steering lock
Seatbelt alarm & interock	Tramming stop and steering lock
Cabin heating	For drilling and tramming
Cabin audio system	USB MP3 / Bluetooth® and loudspeakers
Fire suppression system	
Hand held fire extinguisher	1 x 6 kg (type ABC)
Manual or automatic system	Ansul, 6 nozzles (TS2-460)
Auto. fire suppression system	Sandvik Eclipse™ (TS2-461)
Carrier	
*Diesel engine	Deutz TCD2.2, EMR, 55 kW, Tier 4F, Stage V Deutz TCD2.2, EMR, 55 kW, China 4
*Diesel engine, for high altitude	Deutz TCD 2.9, 75kW, Stage III
*Foam filled tires	4 pcs
Brake release	Manual hand pump
PDS interface	CANbus Level 9
Wheel chocks and holders	2 Sets
Speedometer	Speed display
Tramming cameras	1 x rear and 2 x side (rear view)
Knowledge Box™	My Sandvik productivity readiness (TS2-390)
Extra items	
Berg plug / berg socket	250A
Spare rock drill	RDX5, RD314 or RD315
Filling device for accumulators	Specification TS2-430
Spare wheel assembly	Standard or foam filled tire
Special tools for rock drill	Field tool set (TS2-434)
	Complete tool set (TS2-435)
Tools and pressure test box	Specification TS2-429
Documentation	Extra paper or PDF manuals
Warranty extension	One year (excl. Kazakhstan)
Package: Country specific	AUS, EUR, US/CAN
Package: Anti-freezing	Specification TS2-588
*Package: Harsh water	Basic or advanced (TS2-049)
*) <i>Replaces standard feature</i>	

Technical drawings

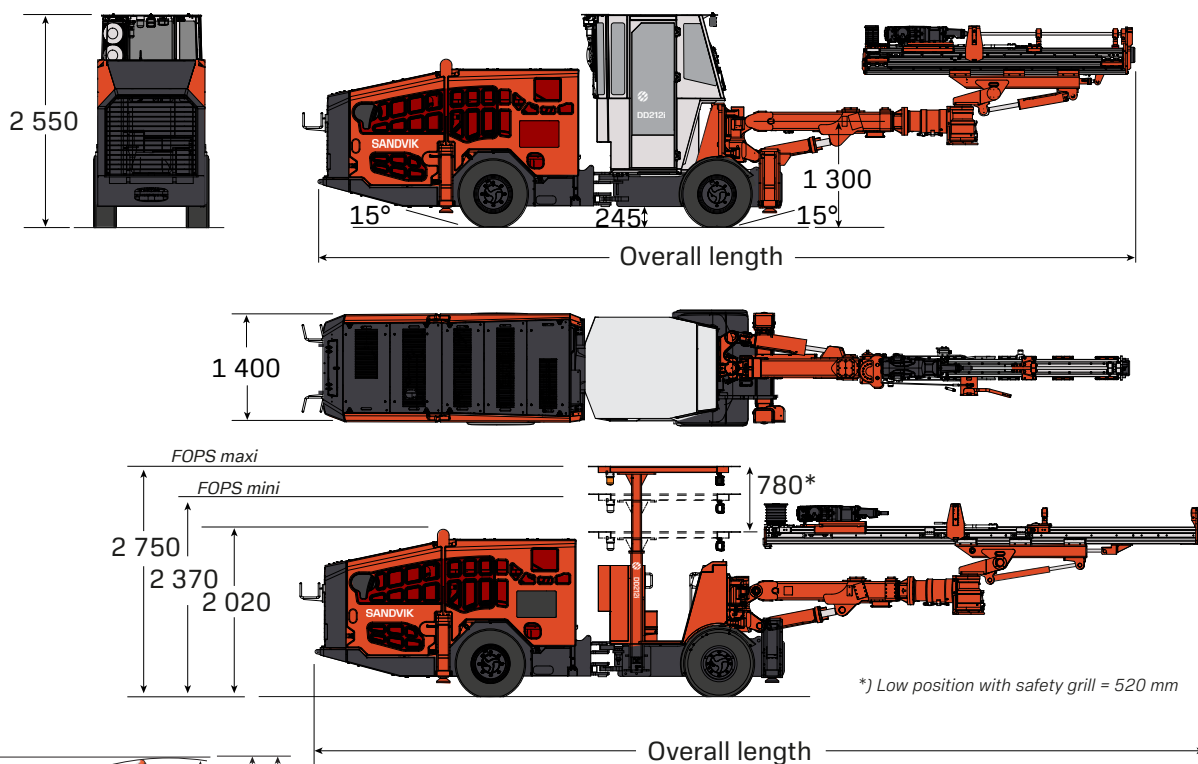
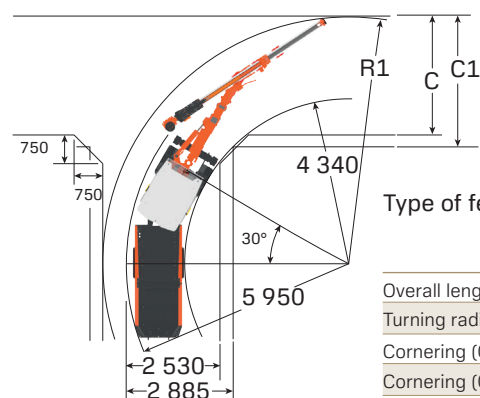
All dimensions in mm



Type of feed	SB20i + CFX6/12 + RDX5 (Optional)	SB20i + CFX6/12 + RD314 or RD315 (Optional)	SB20i + CFX-XS + RD314 (Optional)
*W (mini)	3 400 mm	3 000 mm	2 100 mm
*H (mini)	3 400 mm	3 000 mm	2 550 mm (cabin) 2 370 mm (canopy FOPS mini)

*)100 mm clearance minimum

Grid 500 x 500 mm
CFX-feed coverage
TF-feed coverage



Type of feed	SB20i + TF5i-10 (Optional)	SB20i + TF5i-12 (Standard)	SB20i + TF5i-14 (Optional)	SB20i + CFX6/12+ RDX5 (Optional)	SB20i + CFX6/12 + RD314 or RD315 (Optional)	SB20i + CFX-XS RD314 (Optional)
Overall length	9 930 mm	10 510 mm	10 510 mm	9 800 mm	9 800 mm	8 845 mm
Turning radius (R1)	6 435 mm	6 545 mm	6 650 mm	6 275 mm	6 285 mm	6 185 mm
Cornering (C)	3 015 mm	3 125 mm	3 235 mm	2 855 mm	2 866 mm	2 765 mm
Cornering (C1)	3 365 mm	3 475 mm	3 583 mm	3 210 mm	3 220 mm	3 120 mm

Values realized with 5° of the sideways tilt (according to ISO 18758)

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