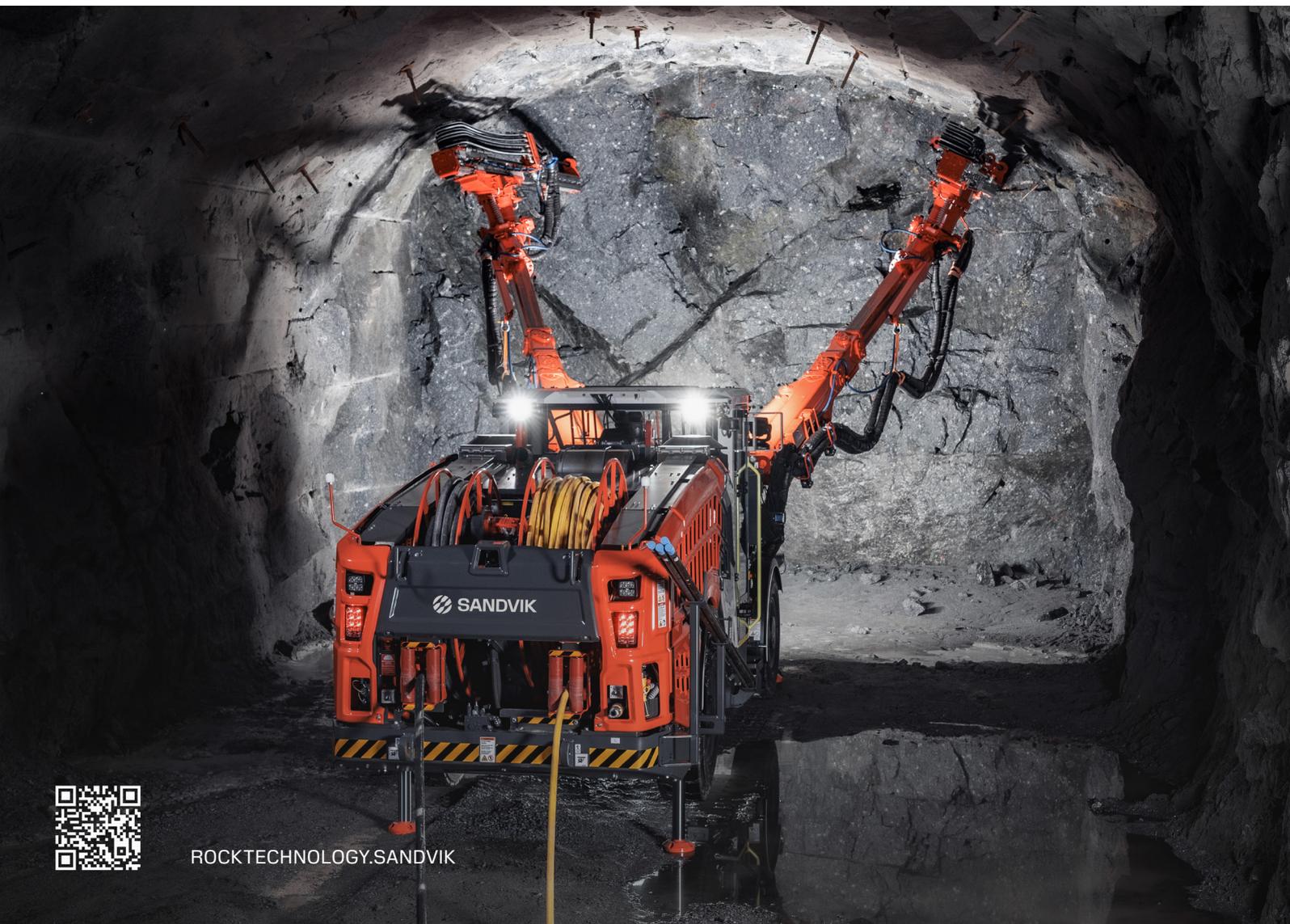


DD322i Development drill

Technical Specification





Low emissions diesel engine

Ergonomic and comfortable cabin

Intelligent controls systems

Intelligent twin boom drill for small headings

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.

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
Hydraulic rock drill	RD520, 20kW
Drill feed	TF500, 12 - 18 ft
Boom	SB55i
Hole length	3.44 - 5.27 m
Hole diameter (drifting)	43 - 64 mm
Automation package	Gold (std), Platinum (opt)
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



RD520
rock drill

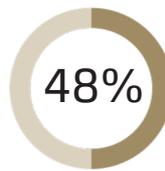
SB55i intelligent booms
with double roll-overs

Main benefits

High level automation

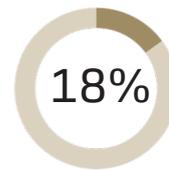
Sandvik DD322i has scalable automation options, from one rod automation, angles and hole depth measurement, and reporting drill plan visualization, up to full face automation and tele remote drilling.

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



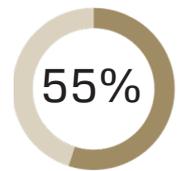
Maximized usability

Up to 48%*
bigger side
coverage



Higher capability

Up to 18%*
bigger face
coverage



Improved ergonomics & safety

More than 55%*
extra visibility /
larger window



Intelligent boom

The SB55i instrumented boom ensures the precise and fast positioning of drill feed with electronic parallelism and instrumentation for hole angle measurements.



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



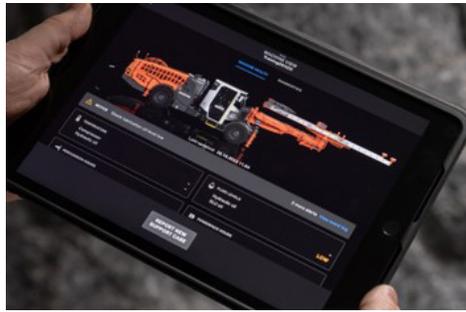
Optimized working environment

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



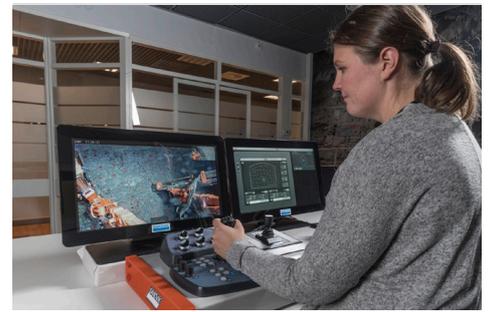
Digital Driller™

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.



Telerelease drilling

Telerelease drilling allows a better utilisation of workforce and equipment and improved operator safety and performance.



Sandvik 365 Parts and Services

Proudly keeping you on track!

Sandvik 365 Parts & Services offer 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 a global infrastructure dedicated to keeping 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	Max. 340 rpm (with OMS100)	Max. 330 rpm (with OMS100)
Rotation torque	520 Nm (with OMS100)	545 Nm (with OMS100)
Hole size (bolting)	43 – 64 mm	43 – 64 mm
Hole size (reaming)	76 – 127 mm	76 – 127 mm
Recommended tools		
43 - 45 mm:	T38 – H35 – Alpha 340	T38 – H35 – Alpha 340
48 - 51 mm:	T38 – H35 – Alpha 360 T38 – R39 – Alpha 360	T38 – H35 – Alpha 360 T38 – R39 – Alpha 360
Shank adapter	T38 (male)	T38 (male)
Weight	225 kg	210 kg

Fixed drilling feed

Type of feed	TF500-12' Standard	TF500-14' Optional	TF500-16' Optional	TF500-18' 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	5 300 mm	5 910 mm	6 520 mm	7 130 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	500 kg	530 kg	560 kg	590 kg

Telescopic drilling feed (options)

Type of feed	TFX6/12	TFX8/14
Feed force (max.)	25 kN	25 kN
Feed extension	1 650 mm	1 650 mm
Total length	3 560 / 5 390 mm	4 170 / 6 000 mm
Hole length	1 610 / 3 440 mm	2 220 / 4 050 mm
Rod length	1 830 / 3 700 mm	2 440 / 4 305 mm
Net weight	640 kg	680 kg

Boom

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

Hydraulic system

Powerpack	HPP555 (2 x 55 kW)
Percussion and feed pump	112 cc
Compressor and WBP pump	45 cc
Rotation pump	33 cc
HVAC (Heating, Ventilation and air conditioning) pump	41 cc / 33 cc
Filtration size (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

Type of control system	SICA
Drilling control modes	Torque optimised/feed percussion/manual
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

Automation package, Gold level (Standard)

Torque optimized drilling control system
Electric joystick controls & GUI
Advance carrier functions
Display of feed angles, drilling depth & penetration rate
Presettable angle & depth indication for reference hole
Counter & recommended change intervals for bits & tools
SB55i boom with electronic parallel holding
Drill plan visualization onboard
Display of drill bit location vs.given drill plan
iSURE Basic (drill plan design)
office tool for planning of drilling, charging & blasting
Drill rig suitable with various navigation methods
Advanced MWD data collection with analysis tool (iSURE)
DrillConnect mobile application: connectivity through knowledge box™

Electric system

Multivoltage	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	TCR4CD 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 maximization
Extra low voltage supply	Continuous 80 A (27 VDC) with battery back-up and management

Air and water flushing

Flushing of holes	Water flushing or air mist flushing
Flushing flow control	2 booms
Water booster pump type	WBP2 HP
Water pump capacity	167 l/min
Water pump 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)
Compressed air outlet	Quick coupling
Oil consumption	180 - 250 g/h
Air consumption	250 - 350 l/min

Technical Specification

Operator's safety cabin

Safety cabin certification	FOPS / ROPS (ISO 3449 / 3471) with safety grill
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 MP3 player readiness
Auxiliary outlets (single phase)	1 x 110V (15A), 1 x 230V (16A), (N/A AUS package)
Audio player	MP3 player, radio, and bluetooth
Boot washer	At each cabin entrance
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, MSHA, Canmet
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 7.7 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 package, Platinum level (Option)

Automation Gold package content	
SB55i boom with electronic parallel holding	
Hole end correction from different start point	
Semi-automatic boom movements	
Automatic boom movements	
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, RDX5
Feed	
Type of feed	14', 16', 18', TFX6/12, 8/14
Rod retainer	TRR1 incl. safety wire, add 35 mm length of the feed
Drill bit changer	6 x std bits (45 / 48 / 51mm bits)

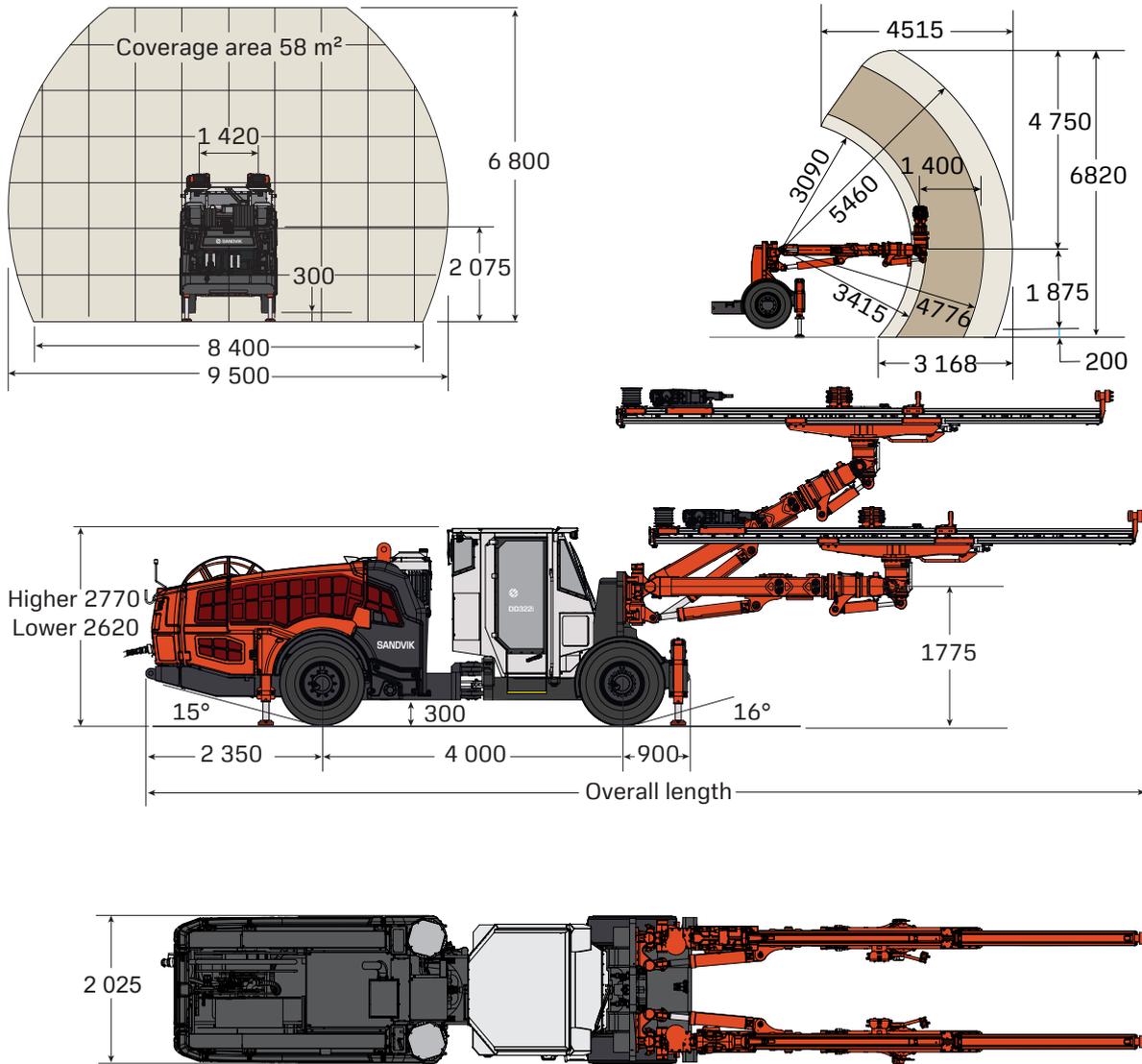
Optional features and packages

Hydraulic system	
Vacuum pump	For hydraulic system
By pass oil filter	
Drilling control system	
Boom collision avoidance system	
Boom controls while tramming	
Data transfert	WLAN including remote GUI view
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)
Greasing systems	
Automatic system	Carrier and boom (complete)
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 7.7 or 9 kg (type ABC)
Manual or automatic system	Ansul, 6 nozzles (TS2-460)
Automatic system	Sandvik Eclipse™ (TS2-461)
Carrier	
*Diesel engine	TCD3.6, 95 kW, China IV TCD3.6 L4, 100 kW, Stage V, Tier 4F, MSHA and Canmet
*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:Teleremote drilling	Specification TS2-422

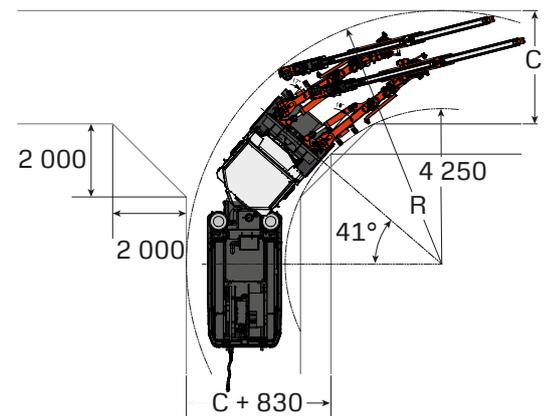
*) Replaces standard feature

Technical drawings

All dimensions in mm



Type of feed	Radius (R)	T-cross (C)	Overall length	Overall length (with TRR1)
TF500-12'	6 755 mm	2 850 mm	12 240 mm	12 385 mm
TF500-14'	6 830 mm	2 925 mm	13 040 mm	13 185 mm
TF500-16'	7 045 mm	3 140 mm	13 345 mm	13 490 mm
TF500-18'	7 185 mm	3 280 mm	13 650 mm	13 795 mm
TFX6/12	6 795 mm	2 890 mm	11 835 mm	11 835 mm
TFX8/14	6 830 mm	2 925 mm	11 835 mm	11 835 mm



Optional packages description

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

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