



DD311DE DEVELOPMENT DRILL

TECHNICAL SPECIFICATION

The Sandvik DD311DE is a single-boom electro-hydraulic jumbo with the ability to drill on both diesel and electric power, designed for fast and accurate drilling within drifting and tunneling of 40 m² cross-sections.

The hydraulic controls enable drilling performance of the highest accuracy, ensuring maximum performance vs. customer requirements.

Our new Sandvik RDX5 rock drill now replaces the previous HLX5 model, capitalizing on the existing reliability and efficiency of its predecessor – whilst further improving/lowering operating costs alongside an extended service interval.

The robust SB40 Boom ensures that optimal coverage is achieved, with drilling performance also being improved via optional instrumentation.

The DD311DE is the last born of Sandvik medium size single boom Diesel Electric jumbos, compromising none of the previous unit's quality, whilst offering a number of improvements including (but not limited to) easier maintenance etc.

KEY FEATURES

Coverage area	40 m ² (5.8 x 7.2 m)
Hydraulic rock drill	1 x RDX5, 20 kW
Drilling feed	1 x TF512, 12 - 16 ft
Boom	1 x SB40
Hole length	Up to 4 660 mm
Drift size class (H x W)	3 000 x 3 000 mm
Turning width (T-section)	3 550 mm (TFX6/12)
Transport width	2 020 mm
Transport height (canopy)	2 140 mm / 3 100 mm
Transport height (cabin)	2 920 mm or 2 670 mm
Transport length	12 520 mm
Total weight	15 000 - 18 000 kg depending on options



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HYDRAULIC ROCK DRILL

Type of rock drill	RDX5 (TS2-433)
Percussion power	20 kW
Percussion pressure	Max. 160 bar (factory setting)
Percussion rate	67 Hz
Rotation speed	Max. 250 rpm (with OMS80)
Rotation torque	400 Nm (with OMS80)
Hole size diameter(drifting)	43 - 64 mm
Hole size diameter (cut hole)	76 - 127 mm
Recommended rod	T38 - Hex 35 - R32 T38 - Hex 35 - Alpha 340 T38 - Hex 35 - R35
Shank adapter (male)	T38
Weight	210 kg
Length	955 mm
Profile height	87 mm
Inflating device for accumulator	Specification TS2-430

FEED

Type of feed	TF500-12' Standard	TF500-14' Optional	TF500-16' Optional	TFX6/12 Optional	TFX8/14 Optional
Feed force	Max. 25 kN	Max. 25 kN	Max. 25 kN	Max. 25 kN	Max. 25 kN
Total length	5 270 mm	5 880 mm	6 490 mm	3 560 / 5 390 mm	4 170 / 6 000 mm
Hole length	3 440 mm	4 050 mm	4 660 mm	1 610 / 3 440 mm	2 220 / 4 050 mm
Rod length	3 700 mm	4 305 mm	4 915 mm	1 830 / 3 700 mm	2 480 / 4 305 mm
Net weight	500 kg	530 kg	560 kg	640 kg	680 kg

BOOM

Type of boom	SB40 (TS2-231)
Parallel coverage	44.5 m²
Parallelism	Automatic hydraulic
Boom extension	1 050 mm
Feed extension	1 350 mm
Boom weight, net	2 100 kg
Roll-over angle	358°

HYDRAULIC SYSTEM

Powerpack	HPP575 (1 x 75 kW) IE3 electric motor or Diesel engine (100 kW)
Filtration (pressure / return)	20 µ / 10 µ Quick couplers for kidney filtration
Oil tank volume	330 liters
Oil tank filling pump	Electric
Cooler for hydraulic oil	OA30 oil-to-air (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.) Reaming control
Automatic cycle	Stop and return automatics
TFX adjustment	Electric
Drilling safety	Boom movements inhibition switches

ELECTRIC SYSTEM

Standard voltage	380 - 690 V (± 10%)
Total installed power	80 kW
Main switch gear	MSE 5
IP classification	Specification TS2-132
Starting method	Star delta 380 V - 575 V DOL 600 - 690 V
Automatic cable reel	TCR1
Cable reel control	Operator station and remote control at rear machine
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)
Parking rear brake / park lights	2 x Red LED

AIR AND WATER SYSTEM

Flushing of holes	By water
Water booster pump	WBP1 hydraulic driven
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	SLU-1 (air / oil mist)
Air compressor	1 m³/min at 7 bar (hydraulic driven)
Rock drill oil consumption	180 - 250 g/h
Rock drill air consumption	250 - 350 l/min

OPERATOR'S SAFETY CABIN

Cabin certification	FOPS / ROPS (ISO 3449 / 3471) Height 2 920 mm
Operation	Standing drilling, seated tramming
Sound pressure level according to EN 16228	Operator station: 80 dB(A)
Operator's seat	Ergonomic T-back seat
Air conditioning	Cooling only
Tramming cameras	On rear frame and cabin or canopy

CARRIER

Type of carrier	NC5-17
Steering system	Frame steering
Carrier articulation	Up to $\pm 38^\circ$
Rear axle oscillation	$\pm 10^\circ$
Ground clearance	320 mm
Diesel engine	Deutz TCD2012 , 100 kW, Tier 3, Stage IIIA, China 3
Exhaust catalyzer	Standard
Transmission	Hydrostatic, automotive
Axles	Dana Spicer 123 (front and rear) with extended differential breathers
Tires	12.00-20 foam filled tires
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% \pm 1:7=8°)
Gradeability / sideways tilt	Max. 15° / 5° (according to ISO 18758)
Fuel tank	160 liters 120 liters with multivoltage option
Tramming oil tank	55 liters
Carrier stabilization	Telescopic (front) Vertical (rear)
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 manuals (PDF files) 1 x Online Parts manuals (MySandvik)

OPTIONAL FEATURES AND PACKAGES**Drilling feed**

*Feed length	14', 16'
*Telescopic feed	TFX6/12, TFX8/14
Rod retainer	TRR1 incl. safety wire, adds 35 mm length of the feed

Boom

*Type of boom	SB40NV instead of SB40 (TS2-257)
Boom suspension system	Specification TS15-232

Drilling control system

Instrumentation	TCAD+ with iSURE I (Option iSure II, III, IV)
Access detector system	Mandatory in Europe (TS2-211)
Access protector system	Mandatory in Canada (TS2-211)

Electric system

*Optional voltage	Multivoltage (380 - 1000 V), at 50 or 60Hz (fuel tank 120 liters)
*Electric cable	Specification TS2-121
Ground fault and overcurrent protection	VYK (N/A USC package) with pilot cord (optional)
Dewatering pump outlet	8 kW (site voltage 380 - 690 V)
Battery jump start	Optional
Amber flashing light	LED (24 V)

OPTIONAL FEATURES AND PACKAGES**Air and water system**

Air mist flushing	Specification TS2-285
*End of hole air flushing	2 x 60 liters air receivers
*Air compressor	1.6 m³/min at 7 bar
Water hose with hooks	32 mm (1 ¼"), 80 meters

Cleaning system

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

Centralized greasing points	Specification TS2-463
Manual system	Greasing gun and cartridge with hose reel (TS2-463)
Automatic system	Carrier and boom (TS2-463)

Operator's safety cabin / canopy

*Safety canopy	
*Low cabin	FOPS (ISO 3449) FOPS / ROPS certification
Cabin heating	Height 2 670 mm,
Cabin audio system	During drilling and tramming Radio / MP3 / Bluetooth and loudspeakers
Safety grill	For cabin or canopy

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)

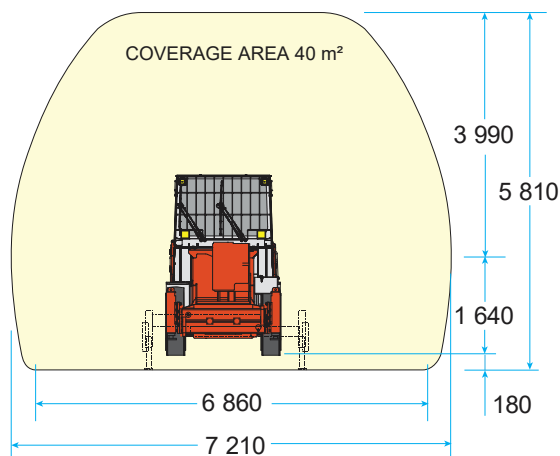
Carrier

*Diesel engine	Deutz TCD3.6, 100 kW, Tier 4F, Stage V, Canmet
Fast filling and evacuation system	Wiggins (complete)
Brake release	Manual hand pump
*Knowledge Box™	My Sandvik productivity readiness (TS2-390)
Wheel chocks and holders	2 Sets
*Directional tramming alarm	Cri du Lynx®

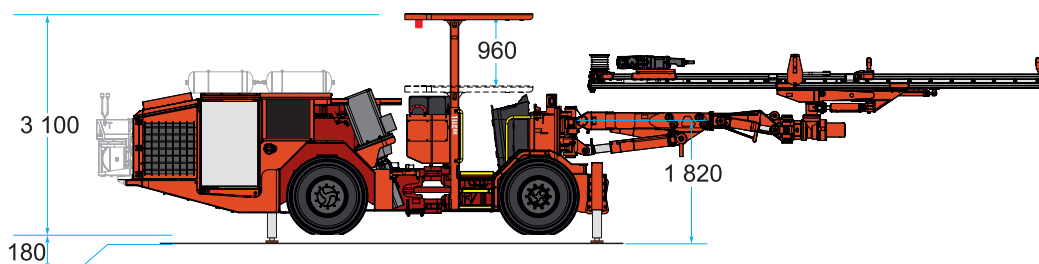
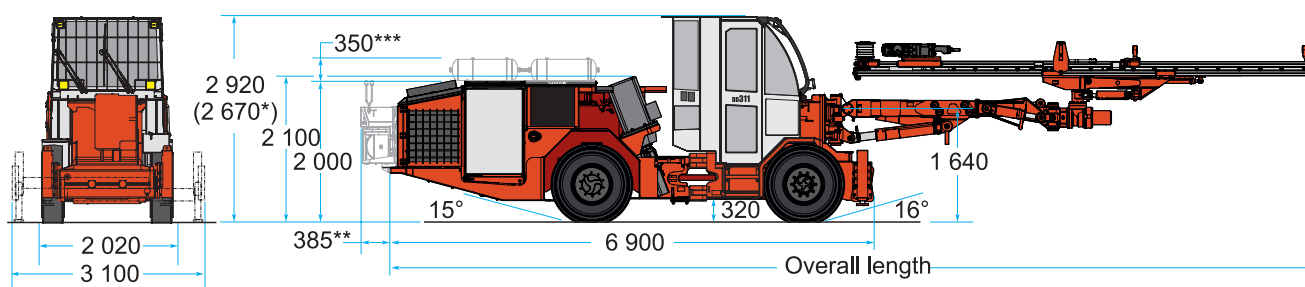
Extra items

Berg plug and socket	250 A
Spare rock drill	RDX5
Tools and pressure test box	Specification TS2-429
Spare wheel assembly	Foam filled tire
Special tools for rock drill	Field tool set (TS2-434) Complete tool set (TS2-435)
Warranty extension	One year (excl. CIS)
Documentation	Extra paper, PDF manuals
Total station navigation set	For TCAD (excl. total station)
Video recorder and speedometer	For CIS
Package: Country specific options	LAM, USC, AUS, CE package
*Package: Harsh water	Basic or advanced (TS2-049)
*Package: Rotary drilling	Specification TS2-195

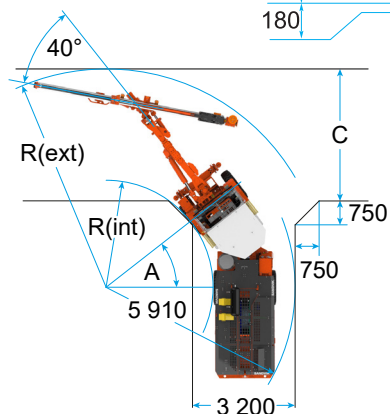
**) Replaces standard feature*



	TF512	TF514	TF516	TFX6/12	TFX8/14
Overall length mm	12 520	12 720	13 170	12 055	12 055



* With low cabin option ** With Sandvik eclipse option *** With Air receiver option



	Angle (A)	Internal Radius R(int)	External Radius R(ext)	T-cross (C)
DD311DE (TF512)	mm 38°	3 345	6 420	3 720
DD311DE (TF514)	mm 38°	3 345	6 535	3 820
DD311DE (TF516)	mm 35°	3 731	6 940	3 950
DD311DE (TFX6/12)	mm 38°	3 345	6 250	3 550
DD311DE (TFX8/14)	mm 38°	3 345	6 302	3 590

All dimensions in mm

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