

# SANDVIK DD311D-40 DEVELOPMENT DRILL

TECHNICAL SPECIFICATION

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Sandvik DD311D-40 is a single-boom diesel hydraulic jumbo for fast and accurate drilling in drifting and tunneling of 40 m<sup>2</sup> cross sections. The hydraulic controls enable accurate and efficient drilling performance.

The HLX5 rock drill has proven to be efficient and powerful. Optimal coverage is achieved with the robust SB40 boom. The drilling performance can be improved with optional instrumentation.

Sandvik DD311 is the successor of the well-known Sandvik DD310 and offers easier maintenance.



## HYDRAULIC ROCK DRILL

Rock drill	HLX5	
Percussion power	20 kW	
Percussion pressure	Max. 220 bar	
Percussion rate	67 Hz	
Rotation speed	Max. 250 rpm (with OMS80)	
Rotation torque	400 Nm (with OMS80)	
Hole size (drifting)	43 - 64 mm	1 <sup>3</sup> / <sub>4</sub> - 2 <sup>1</sup> / <sub>2</sub> "
Hole size (cut hole)	76 - 127 mm	3" - 5"
Recommended rod	T38 - R32 T38 - Alpha 330 T38 - R35	
Shank adapter	T38 (male)	
Weight	210 kg	462.9 lb
Length	955 mm	37.6 in
Profile height	87 mm	3.4 in
Shank lubrication device	Air / oil mist, SLU-1	
Air consumption	250 - 350 l/min	
Oil consumption	180 - 250 g/h	
Inflating device for accumulator	See spec sheet 2-9110	

## BOOM

Boom	SB40	
Parallel coverage	44.5 m <sup>2</sup>	146 ft <sup>2</sup>
Parallelism	Automatic hydraulic	
Boom extension	1050 mm	41.3 in
Boom weight, net	2100 kg	4630 lb
Roll-over angle	358°	

## FEED

Feed	TF500-12	
Feed force	Max. 25 kN	
Feed extension	1350 mm	53 in

## FEED DIMENSIONS

Feed TF500	Total Length	Hole Length	Rod Length	Net Weight
10 ft*	4660 mm	2830 mm	3090 mm	470 kg
	183.4 in	111.4 in	121.6 in	1036 lb
12 ft	5270 mm	3440 mm	3700 mm	500 kg
	207.4 in	135.4 in	145.6 in	1102 lb
14 ft*	5880 mm	4050 mm	4305 mm	530 kg
	231.4 in	159.4 in	169.4 in	1168 lb
16 ft*	6490 mm	4660 mm	4915 mm	560 kg
	255.5 in	183.4 in	193.5 in	1234 lb

\*Alternative options features/components \*\* Additional options features/components

## HYDRAULIC SYSTEM

Powerpack	Diesel engine	
Percussion pump	71 cc (variable)	
Rotation pump	38 cc (gear)	
Filtration size	20 micron (pressure)	
	10 micron (return)	
Oil tank volume	330 liters (drilling)	87.2 US gal
	55 liters (tramping)	14.5 US gal
Tank filling	Manual pump	
Oil cooler	Water cooled. Cooling capacity 1 x 45 kW	
Tools set for hydraulic adjustment	See spec sheet 2-9100	

## CONTROL SYSTEM

Type	THC560, hydraulic	
Manual boom control	Direct control	
	Fully proportional	
	Hydraulic parallelism	
Drilling control	Manual collaring	
	Feed/percussion control	
	Anti-jamming system	
Automatic cycle	Stop and return automatics	

## ELECTRIC SYSTEM

Main switch	MSE5 (24V)	
IP classification	See spec sheet TS2-132	
Sealed AGM batteries	2 x 12V, 95Ah	
Front lights (combined working and driving)	2 x 35 W HID + 2 x 70 W (24V)	
Rear working lights	2 x 70 W (24V)	
Rear driving lights	2 x 70 W (24V)	
Parking rear brake/park lights	2 x Red LED	

## FLUSHING SYSTEM

Flushing	Water	
Water pump type	WBP1 hydraulic driven 8 cc (13,6l/min)	
Water pump capacity	43 l/min	
Water pump inlet pressure	2 bar (Min.)	
Flushing water pressure	10 - 15 bar	
Air compressor	CTN10H (hydraulic driven 16cc) 1m <sup>3</sup> /min (7 bar)	

## TRAMMING &amp; OPERATOR STATION

Tramming speed	Horizontal: 12 km/h	7.4 mph
	14% = 1:7 = 8° 5.0 km/h	3.1 mph
Gradeability / Inclination	Max. 15° / 5°	
Safety canopy	FOPS/ROPS (ISO3449 / ISO3471)	
FOPS (Mini - Maxi)	ROPS , 15700 kg 2430 mm - 2930 mm 95.6 in - 105.3 in	
Operation	Standard drilling, seated tramming	
Sound pressure level according to EN791	Operator station: < 95 db(A)	
Seat	Ergonomic, adjustable for tramming including seat belt	

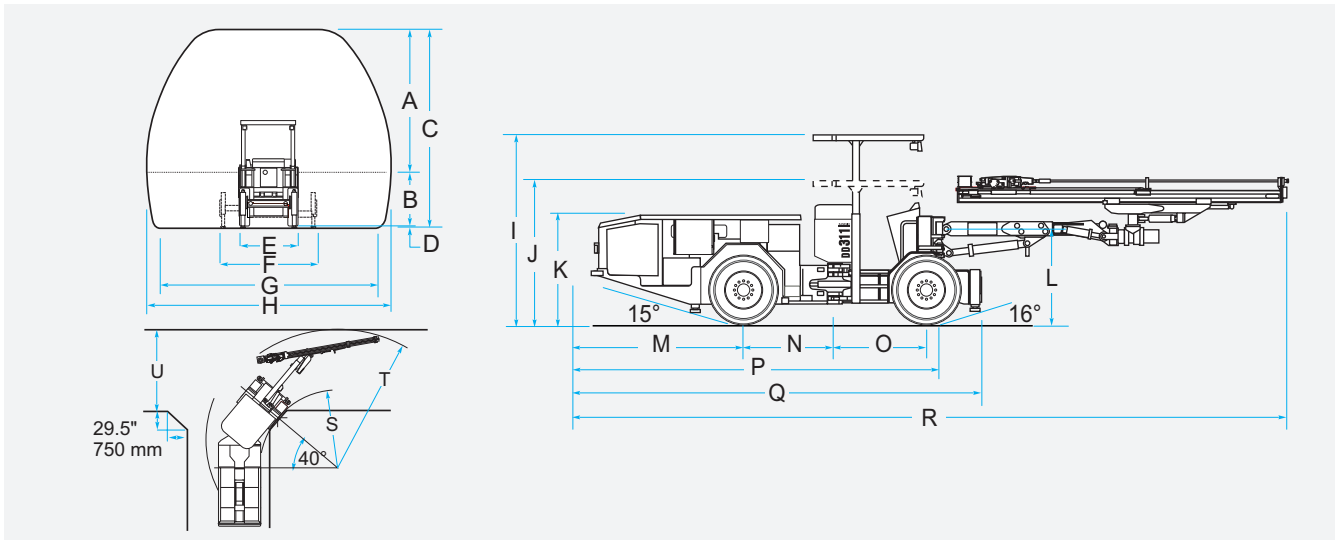
## CARRIER

Carrier	NC5	
Carrier type	Wheel mounted, frame steering	
Frame steering	± 40°	
Rear oscillation	± 10°	
Ground clearance	320 mm	12.5 in
Diesel engine	Deutz BF4M2012C, 93kW. Tier 2, Stage 2	
Diesel engine control	Electronic, EMR	
Exhaust catalyzer	Standard	
Transmission	Hydrostatic, automotive	
Axles	Spicer 112 with extended differential breathers	
Tires	12.00 - 20	
Service brakes	Hydrostatic and positive braking	
Brakes parking emergency	Hydraulic oil immersed multiple disc brakes on both brakes	
Fuel tank	180 liters	47.5 US gal
Hydraulic jacks	Telescopic (front)	
	Vertical (rear)	
Total weight Depending on options	Around 14500 kg	Around 32000 lb

## OPTIONS &amp; PACKAGES

Boom Boom*	SB40NV instead of SB40
Feed TF Feed lengths* Telescopic feed*	10, 14, 16 ft TFX6/12. 8/14
Drilling option Rod retainer**  Two rod system**	TRRI included safety wire Adds 35mm length of the TF-Feed TRS included TRR1 & Safety wire
Instrumentation Angle**	TMS D1
Hydraulic system Tank filling* Biodegradable oils*	Electric pump Shell Naturelle HFE46/HFE68
Control system Constant speed drilling**	Replaces feed / percussion control
Cleaning system Pressure cleaning system with reel** HP cleaning system with reel**	Max. 15 bar Max.180 bar
Greasing system Centralized greasing points** Greasing unit with pump, reel and nozzle** Automatic greasing system**	Carrier Manual Carrier and booms
Electric system Sensors in the jacks** Battery jump start** Extra working lights (front)** Amber strobe light**	Indicator light for jacks up 2 x 35 W HID (24V) LED (24V)
Flushing system Air mist flushing** Water flushing with air cleaning of hole** External air connection** Water hose with hooks** Additional air for hole cleaning with air**	See spec 5-9510 External water + 2x60l air receivers External water + CTN16H (11kW) IP5 air cleaner 32 mm (1 1/4); 80 meters 2 x 60l air receiver
Fire suppression system Handheld fire extinguisher** Manual fire suppression system** Auto fire suppression system**	1 x 6kg, Type ABC, Desautel Ansul, 6 nozzles (incl.1 x extinguisher) Ansul, 6 nozzles (incl.1 x extinguisher)
Tramming & operator station Seat* Front screen protection bar**	T back seats
Carrier Diesel engine* Tires* Fast filling systems** Wheel chocks and holders** Brake release** Reversal rotation for cleaning**	Deutz TCD2012,95kW.Tier 3,Stage 3A Foam filled tires Complete 2 pieces Manual hand pump Engine cooler and fan tramming oil cooler fan
Extra items Spare rock drill** Spare wheel assembly** Special tools for rock drill** Documentation**	Standard or foam filled Extra manuals
Packages Regional packages** Harsh water package**	LAM, USC, AUS Basic or advanced (spec TS2-049)

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**DIMENSIONS - DRILLING**

Model	Units	COVERAGE AREA							
		A	B	C	D	E	F	G	H
DD311-40	mm	3990	1590	5830	250	1875	3070	6860	7210
	in	157	62.5	229.5	9.8	73.8	120.8	270	283.8

**DIMENSIONS - TRAMMING**

Model	Units	MACHINE DIMENSIONS										CORNERING		
		I	J	K	L	M	N	O	P	Q	R	S	T	U
DD311-40 TF510*	mm	3100	2140	1830	1590	2775	1500	1500	6040	6700	11785	3180	6168	4245
	in	122	84.2	72	62.5	109.2	59	59	237.8	265.1	464	125.2	242.8	167.1
DD311-40 TF512	mm	3100	2140	1830	1590	2775	1500	1500	6040	6735	12335	3180	6290	4245
	in	122	84.2	72	62.5	109.2	59	59	237.8	265.1	485.6	125.2	247.6	167.1
DD311-40 TF516*	mm	3100	2140	1830	1590	2775	1500	1500	6040	6735	12985	3180	7000	4800
	in	122	84.2	72	62.5	109.2	59	59	237.8	265.1	511.2	125.2	275.5	188.9
DD311-40 TFX6/12	mm	3100	2140	1830	1590	2775	1500	1500	6040	6735	11870	3180	6230	4245
	in	122	84.2	72	62.5	109.2	59	59	237.8	265.1	467.3	125.2	245.2	167.1
DD311-40 TFX8/14	mm	3100	2140	1830	1590	2775	1500	1500	6040	6735	11870	3180	6230	4245
	in	122	84.2	72	62.5	109.2	59	59	237.8	265.1	467.3	125.2	245.2	167.1

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