

SANDVIK DD31 | D-40E DEVELOPEMENT DRILL

TECHNICAL SPECIFICATION



Sandvik DD31 | D-40E is a single boom electro-hydraulic jumbo with the ability to drill on both diesel and electric power. It is designed for fast and accurate drilling in drifting and tunneling of 40 m² 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 DD31 | 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 ³ / ₄ - 2 ¹ / ₂
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 ²	146 ft ²
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

HYDRAULIC SYSTEM

Powerpack	HPP575 (75kW)	
	Diesel engine	
Percussion pump	100 cc (variable)	
	Diesel engine 71 cc (variable)	
Triple pump	33 cc (Rotation)	
	29 cc (Air compressor)	
	19 cc (Water pump and air conditioning)	
Rotation pump	Diesel engine 38cc (gear)	
Filtration size	20 micron (pressure)	
	10 micron (return)	
Oil tank volume	330 liters (drilling)	87.2 US gal
	55 liters (tramming)	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 AND OPTIONS

Total input power	80kW	
Main switch	MSE5	
IP classification	See spec sheet TS2-132	
Standard voltages	380-690 VAC	
Starting method	Star delta starter 380VAC - 575 VAC	
Voltage fluctuation	± 10%	
Automatic cable reel	TCR1	
Cable reel control (in & out)	Operator station	
	Remote control at rear machine	
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	

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

FLUSHING SYSTEM AND OPTIONS

Flushing	Water	
Water pump type	WBP1 hydraulic driven 8cc (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 ³ /min (7 bar)	

TRAMMING & 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)	
	ROPS < 15700 kg	
Operation	Standard drilling, seated tramming	
Sound pressure level according to EN791	Operator station: < 95 db(A)	
Seat	Ergonomic, adjustable for tramming including seat belt	

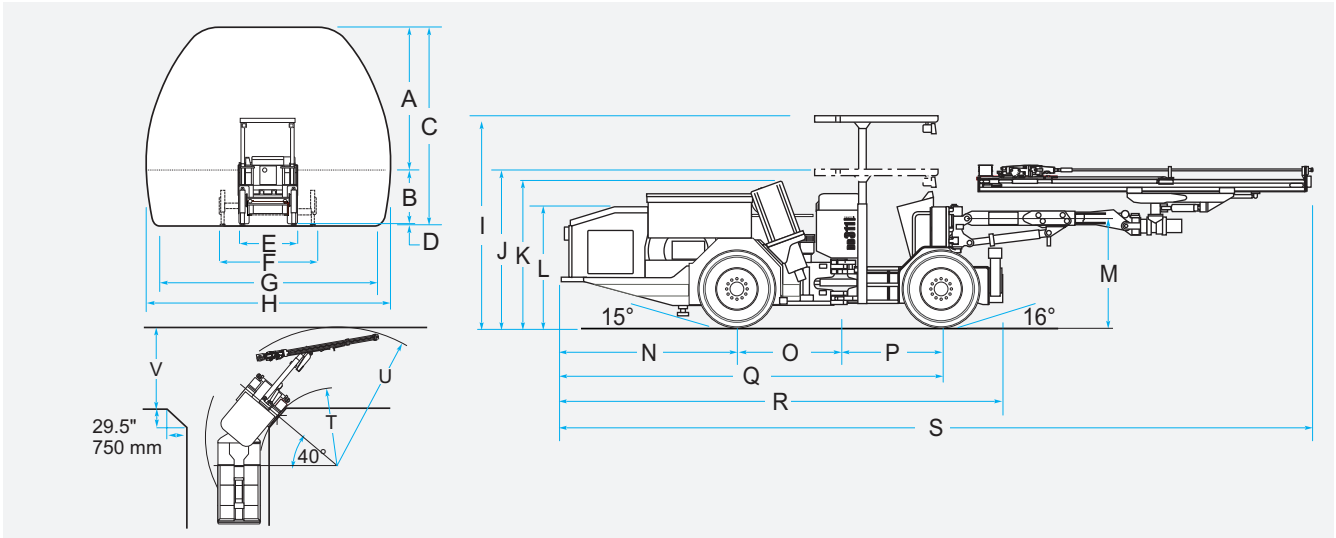
CARRIER

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 (front, rear)	Spicer 112 / Spicer 123 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 15800 kg	Around 34850 lb

OPTIONS & 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**	TRRI included safety wire Adds 35mm length of the TF-Feed TRS included TRR1 & Safety wire	
Two rod system**		
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** High pressure 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 Optional voltage* Starting method Electric cable rubber or PUR** Auxiliary outlet** Sensors in the jacks** Battery jump start** Extra working lights (front)** Amber strobe light**	1000 VAC, 50 Hz Direct on line (DOL) 1000VAC Depending on voltage (spec TS2-121) 1 x 230 VAC on main switchgear door 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 reel with water hose** Water hose with hooks** Additional air for hole cleaning with air**	See spec 5-9510 External water + 2x60l air receivers External water + CTN16 (11kW) IP5 air cleaner THR + 32 mm (1 1/4"); 80 meters 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 Ground fault and overcurrent protection** Spare rock drill** Spare wheel assembly** Special tools for rock drill** Documentation**	VYK Standard or foam filled Extra manuals	
Packages Regional packages** Harsh water package**	LAM, USC, AUS Basic or advanced (spec TS2-049)	

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



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	V
DD311-40C TF510*	mm	3100	2140	2115	1830	1590	2775	1500	1500	6040	6700	11785	3180	6168	4245
	in	122	84.2	83.2	72	62.5	110.6	59	59	237.8	265.1	464	125.2	242.8	167.1
DD311-40C TF512	mm	3100	2140	2115	1830	1590	2810	1500	1500	6040	6735	12335	3180	6290	4245
	in	122	84.2	83.2	72	62.5	110.6	59	59	237.8	265.1	485.6	125.2	247.6	167.1
DD311-40C TF516*	mm	3100	2140	2115	1830	1590	2810	1500	1500	6040	6735	12985	3180	7000	4800
	in	122	84.2	83.2	72	62.5	110.6	59	59	237.8	265.1	511.2	125.2	275.5	188.9
DD311-40C TFX6/12	mm	3100	2140	2115	1830	1590	2810	1500	1500	6040	6735	11870	3180	6230	4245
	in	122	84.2	83.2	72	62.5	110.6	59	59	237.8	265.1	467.3	125.2	245.2	167.1
DD311-40C TFX8/14	mm	3100	2140	2115	1830	1590	2810	1500	1500	6040	6735	11870	3180	6230	4245
	in	122	84.2	83.2	72	62.5	110.6	59	59	237.8	265.1	467.3	125.2	245.2	167.1

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