

SANDVIK DU311 UNDERGROUND ITH DRILL

TECHNICAL SPECIFICATION



Sandvik DU311 is a compact ITH drill unitized with an on-board booster mounted on a hydrostatic drive mobile center articulated carrier.

Sandvik DU311 can be used to drill from 3 1/2 in (89 mm) to 8.5 in (216 mm) diameter holes to a depth greater than 330 ft (100 m) down hole with its on-board booster.

With additional air supply it can be used for drilling up to 12 in (205 mm) and reaming up to 17.5 in (445 mm) diameter holes with a 12 in hammer for rapid raising.



TOP DRIVE

Top drive	6230	
Max. working pressure	207 bar	3,000 psi
Max. torque	5,730 Nm	4,225 lb.ft
Rotation speed	0 - 60 rpm	
Patented splined piston breakout system		

CARRIER

Carrier	Pegasus	
Safety canopy	FOPS	
Diesel engine	Mercedes 904 (130 kW), Tier 3, Stage IIIA	
Transmission	Hydrostatic	
Axles	Dana Spicer 123	
Brakes service parking		SAHR SAHR
Tires	12.00 x 20 ITL solid rubber	
Steering	Frame steering, hydraulic	
Articulation	±40°	
Rear oscillation	±10°	
Ground clearance	230 mm	9 in
Fuel tank	114 L	30 US gal
Hydraulic jacks	2 front, 2 rear	
Cable reel with automatic cable limit stop (cable and power plug not supplied)		
Centralized grease lubrication		
Tramming speed, diesel horizontal only	7 km/h	4.3 mph
Speed at 15% grade	7 km/h	4.3 mph
Tramming speed, electric horizontal only	1 km/h	0.6 mph
Gradeability	35% (20°)	
Weight	22,700 kg	50,000 lbs

MAST

Mast	Standard mast, fixed centralizer	
Feed force	70 kN	15,800 lbs
Max. opening	222 mm	8.75 in

CAROUSEL

Carousel	16 + 1 drill pipes - For up to 102 mm (4 in) pipe	
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POSITIONING SYSTEM

Single slideover	762 mm	30 in
Feed extension		
1.8 m (6 ft) drill pipe	1,370 mm	54 in
1.5 m (5 ft) drill pipe	1,143 mm	45 in
1.2 m (4 ft) drill pipe	914 mm	36 in
Roll over angle	360°	
Stinger extension - top	1,830 mm	6 ft
Stinger extension - bottom	610 mm	2 ft

CONTROL SYSTEM

Control system	ERIS panel - CanBus	
Accra feed	Feed and rotation control / anti-jamming	
Remote control	Tripod mounted, with 15 m (50 ft) cable	

POWERPACK

Electric motor	1 x 37 kW	1 x 50 hp
Pump type	Dual pump	
Filtration pressure	1 x 5 micron	
Filtration return	1 x 10 micron	
Oil tank volume	170 L	44 US gal
Tank filling	Electric fill pump	
Oil cooling	Shell and tube cooler	

HAMMER LUBRICATION SYSTEM

Grease / oil injection		
Metering capacity	4 L/hr	1 US gal/hr
Tank size	32 L	8.5 US gal

AIR BOOSTER

Booster type	Reciprocating - KR551	
Electric motor	1 x 55 kW	1 x 75 hp
Max. working pressure	24.1 bar	350 psi
FAD, max. working pressure	20 m³/min	700 cfm
Inlet pressure	6 bar	90 psi

WATER INJECTION SYSTEM

Water pump type	Triplex piston pump	
Capacity	27 L/min (48 bar)	7 gal/min (700 psi)

ELECTRICAL SYSTEM

Total input power	92 kW (125 hp)
Standard voltages	600 VAC
Standard frequency	60 Hz
Lights - working	2 x 43 W LED
Lights - driving lights	4 x 43 W LED
Starter	delta wye
Safety shutdowns and alarms	Low mine water pressure Low compressor oil pressure High discharge air tempature Low hydraulic oil level High hydraulic oil temperature
Safety feature	Phase loss / phase reversal protection Motor overload protection Voltmeter and ammeter Indicator lights Zener diode Tram active strobe Backup alarm

SELECTION OF OPTIONAL EQUIPMENT

OPTIONAL MASTS

Masts	Feed force		Max. opening		Drill pipe lengths
Standard mast (Fixed or split centralizer)	70 kN	15,800 lbs	222 mm	8.75 in	4 / 5 / 6 ft
Heavy mast (Split Centralizer)	133 kN	30,000 lbs	222 mm	8.75 in	4 / 5 / 6 ft

OPTIONAL CAROUSEL

Carousel	Pipe size
16 + 1 drill pipe	76 - 127 mm 3 - 5 in

PIPE HANDLING OPTIONS*

Pipe arm, single axis	To assist manual pipe handling
Pipe arm, dual axis	To assist manual pipe handling

*Pipe arm is not compatible with carousel

POSITIONING SYSTEMS OPTIONS

50 / 50 Stingers		
Top	1,219 mm	4 ft
Bottom	1,219 mm	4 ft

FIRE SUPRESSION

Automatic	ANSUL system (6 nozzles)
Manual	ANSUL system (6 nozzles)

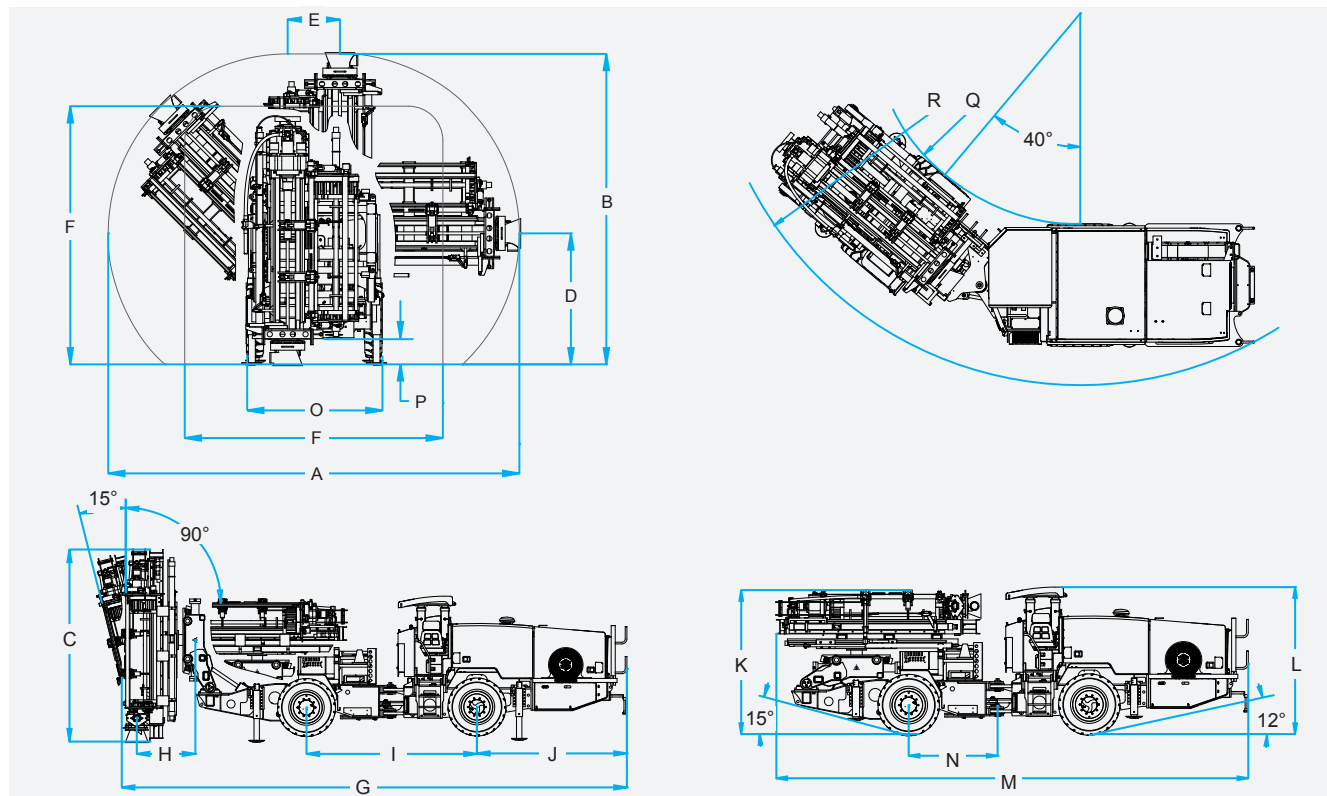
BLIND BORE PACKAGE

Heavy hoist mast Hydraulic swing out centralizers Top drive spacer	1.5 m (5 ft) or 1.8 m (6 ft) rods can be used with		
6230-RBR30 top drive	max. torque	8,520 Nm	6,283 lb.ft
	rotation speed	0-50 rpm	

ADDITIONAL OPTIONS

Alignment laser
Angle indicators
Auto lubrication (Lincoln)
Cuttings diverter (For use with blind boring mast)
Fast filling and evacuation system (Wiggins) for fuel only
Fast filling and evacuation system (Wiggins) for engine oil, hydraulic oil, transmission oil, coolant and fuel
Indicator for low level hammer lubricant
On-board pressure washer
Petol chain wrench
Remote thread lubrication
Special electrics 1,000 VAC
Special electrics 50 Hz
Tools to specifications
Wassara water hammer package
Wheels chocks

DIMENSIONS



DIMENSIONS - DRILLING

		Max. reach		Mast height	Pivot height	Slideover	Min. drift	Length	Laser offset	Track length	Overhang
Model	Units	A	B	C	D	E	F	G	H	I	J
DU311 6 ft rods	in	235.7	178	142	75.1	30	148	373.4	43.3	126	110.9
	mm	5,987	4,520	3,607	1,908	762	3,759	9,485	1,100	3,200	2,816
DU311 5 ft rods	in	217.7	169	130	75.1	30	136	373.4	43.3	126	110.9
	mm	5,530	4,291	3,302	1,908	762	3,454	9,485	1,100	3,200	2,816
DU311 4 ft rods	in	199.7	160	118	75.1	30	124	373.4	43.3	126	110.9
	mm	5,072	4,063	2,997	1,908	762	3,150	9,485	1,100	3,200	2,816

DIMENSIONS - TRAMMING

		Height		Length	Pivot	Width	Clearance	Min. radius	Max. radius
Model	Units	K	L	M	N	O	P	Q	R
DU311 All	in	100	102.5	329.2	62	78	9	133.9	236.2
	mm	2,540	2,604	8,362	1,575	1,981	230	3,400	6,000

DISTRIBUTOR:

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