

SANDVIK DU42I-C UNDERGROUND DRILL RIG

TECHNICAL SPECIFICATION



DU42I-C is an ITH drill unitized with an on-board booster and complete with a FOPS/ROPS cabin. This drill is mounted on a mobile center articulated carrier designed for high mobility in underground mines with ramp access.

With its on-board air booster the DU42I-C drill can be used to drill from 3 5/8" (92 mm) to 8.5" (216 mm) diameter holes to a depth greater than 330' (100 m) down hole. It can also be used for reaming up to 17.5" (445 mm) diameter holes with a 12" hammer for rapid raising.



CARRIER

Carrier	Centaur	
Enclosed cabin	FOPS/ROPS air conditioning and heating	
Diesel engine	Mercedez 904 (130 kW) tier III	
Transmission	Clark 32000	
Axles	Dana Spicer 114	
Brakes service parking	SAHR SAHR	
Tires	12.00 x 24 ITL Solid Rubber	
Steering	frame steering hydraulic steering wheel control	
Articulation		±40°
Rear oscillation		±8°
Ground clearance	216 mm	8.5 in
Fuel tank	122 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, desel horizontal only Speed at 15% grade Tramming speed, electric horizontal only	15 km/h 4 km/h 1 km/h	10 mph 2.5 mph 0.6 mph
Gradeability		35% (20°)
Weight	29484 kg	65000 lbs

MAST

Mast	standard mast, fixed centralizer	
Feed force	70 kN	15800 lbs
Max. opening	222 mm	8.75 in

CAROUSEL

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

Slideover boom and pendulum	3300 mm	130 in
Feed extension		
1.8 m (6 ft) drill pipe	1370 mm	54 in
1.5 m (5 ft) drill pipe	1143 mm	45 in
1.2 m (4 ft) drill pipe	914 mm	36 in
Swing angle	360°	
Stinger extension - top	1830 mm	6 ft
Stinger extension - bottom	610 mm	2 ft

CONTROL SYSTEM

Control system	CanBus, RDC2 operator panel	
Accra feed	feed and rotation control/anti-jamming	

POWERPACK

Open loop load sensing hydraulic system		
Electric motor	1 x 45 kW	1 x 60 hp
Pump type	1 x 100 cc, 1 x 74 cc, 1 x 17 cc variable displacement axial piston pump	6.1 cu.in/rev 4.5 cu.in/rev 1 cu.in/rev
Filtration pressure	1 x 5 micron	
Filtration return	1 x 10 micron	
Oil tank volume	246 L	65 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	screw - KS921	
Electric motor	1 x 92 kW	1 x 125 hp
Max. working pressure	27.6 bar	400 psi
FAD, max. working pressure	20 m³/min	700 cfm
Inlet pressure	7 bar	100 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	140 kW (188 hp)
Standard voltage	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	15800 lbs	222 mm	8.75 in	4/5/6 ft
Heavy mast (Split Centralizer)	133 kN	30000 lbs	222 mm	8.75 in	4/5/6 ft

OPTIONAL CAROUSELS

Carousel	Pipe size
16+1 drill pipe	76-127 mm 3-5 in
21+1 drill pipe	76-127 mm 3-5 in
32+1 drill pipe	76-102 mm 3-4 in

PIPE HANDLING OPTIONS

Pipe arm, single axis*	to increase depth past carousel capacity
Drill pipe manipulator	to assist loading pipe arm

*Pipe arm is not compatible with carousel

REVERSE CIRCULATION OPTION

Discharge diameter	76 mm	3 in
Max. ID of centre tube	64 mm	2.5 in
6230-RC top drive	RC Swivel	
Hydraulic centralizers with RC slip plate and dual torque		

FIRE SUPPRESSION

Automatic	ANSUL system (6 nozzles)
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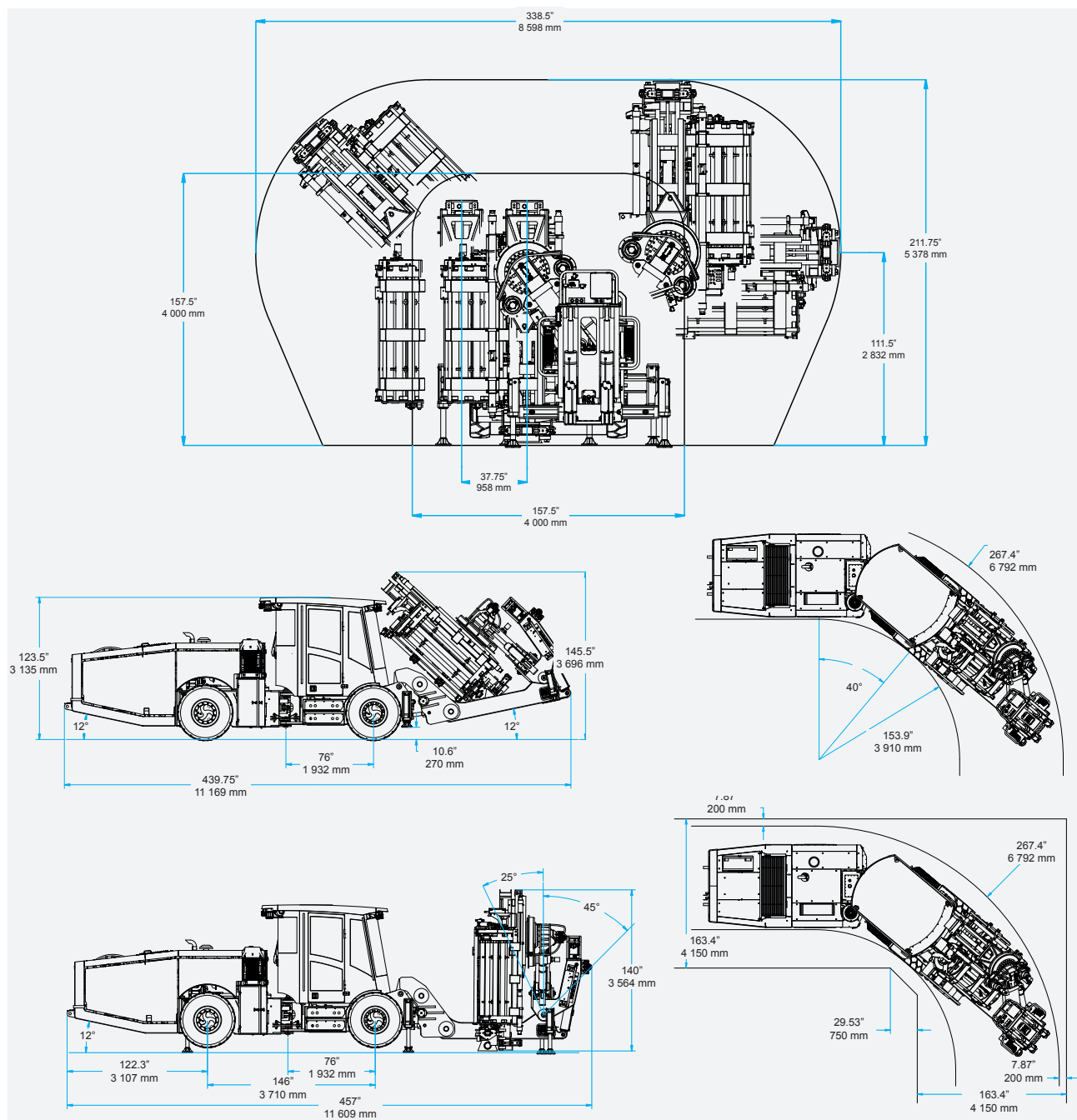
OPTIONAL AIR BOOSTERS

KS1121 - Screw		
Electric motor	1 X 112 kW	1 x 150 hp
Max. working pressure	27.6 bar	400 psi
FAD, max working pres	29.7 m³/min	1050 cfm
Min. inlet pressure	7 bar	100 psi
KS1501 - Screw		
Electric motor	1 x 150 kW	1 x 200 hp
Max. working pressure	27.6 bar	400 psi
FAD, max. working pres	36.8 m³/min	1300 cfm
Min. inlet pressure	7 bar	100 psi

ADDITIONAL OPTIONS

Alignment laser
Angle indicators
Auto lubrication (Lincoln)
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 1000 VAC
Special electrics 50 Hz
Tools to specifications
Wheels chocks

DIMENSIONS



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