



SANDVIK DR413i ROTARY BLAST HOLE DRILL

TECHNICAL SPECIFICATION

Sandvik DR413i is a diesel-powered, self-propelled, crawler-mounted blasthole drill for surface mining. It is standard equipped for rotary drilling.

HIGHER PRODUCTIVITY THROUGH INNOVATION

Sandvik DR413i uses a CAN bus controlled hydraulic system to monitor the machine, allowing for timely preventative maintenance and delivering higher availability.

RUGGED DESIGN

Sandvik DR413i is equipped to drill 250 to 349 mm (9 7/8 to 13 3/4 inch) diameter blastholes with single pass capacity of 17 meters (55.7 feet) and total depth capacity of 24.6 meters (80.7 feet).

INNOVATION FOR SAFER OPERATION

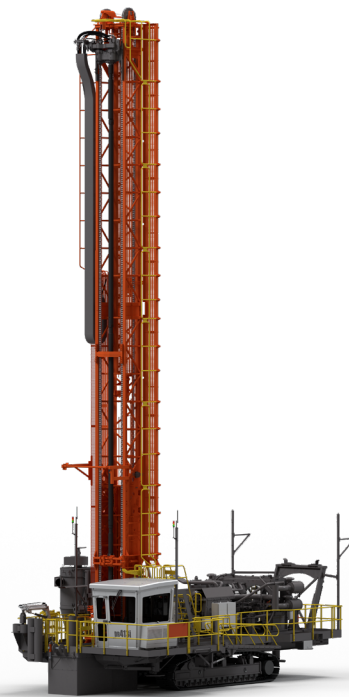
Pipes can be handled from within the cab using the Sandvik carousel and breakout system, with optional hands-free bits changing capability.

OPERATOR COMFORT AND CONTROL

The new-generation ergonomically designed cab includes controls on the armrests, touchscreens, angled windows to reduce glare and a safari-style roof to keep the cab cooler.

EASIER ACCESS

Wider, 360-degree walkways enable superior drill access for routine maintenance. An optional hydraulic main-access stairway can be mounted to provide a parallel step onto and off the drill.



DESIGNED WITH SAFETY IN MIND

We designed Sandvik DR413i with worldwide standards in mind, such as ISO Standards, Mining Design Guidelines (MDG) for mobile and transportable equipment in mines, Earth Moving Equipment Safety Round Table (EMESRT) Design Philosophies.

COMPRESSOR MANAGEMENT

Advanced compressor management reduces the compressor load allowing the operator to manage air volumes and pressures to maximize efficiency and reduce fuel burn, reducing your carbon footprint and extending compressor life.

PERFORMANCE

	Metric	Imperial
Hole diameter	250 to 349 mm	9.88 – 13.75 in
First pass hole depth	17 m	55.7 ft.
Max. hole depth	24.6 m	80.7 ft.
Pull down force	444 kN	100,000 lbf.
Weight on bit	52,100 kg	115,000 lbs.

POWER GROUP

	Metric	Imperial
Engine options		
CAT (T4 / Non T4)	839 kW	1125 HP
Cummins (T4 / Non T4)	783 kW	1050 HP
Ambient range	-40 to 50°C	-40 to 122°F

Compressor

Rotary Drilling	76.6 m³/min. @ 5.5 bar	2600 CFM @ 80 psi
Fuel tank	3,407 l	900 gal.

HYDRAULIC SYSTEM

	Metric	Imperial
Reservoir Capacity	1,181 l	312 gal.
Reservoir pressurization	0.3-0.5 bar	5 - 7 psi

FRAME AND JACKS

	Metric	Imperial
Main frame	Designed with wide flange beams & design verified by structural FEA calculations	
Walkways	Slip resistant steel grip strut imaterial	
Leveling jacks	4	
Pad diameter	762 mm	30 in
Pad ground clearance	584 mm (Rear) 558 mm (Front)	23 in 22 in

UNDERCARRIAGE

	Metric	Imperial
Model	S46HD	
Track shoe width	900 mm	35.4 in
Track shoe type	Triple grouser	
Width over tracks	4.57 m	15 ft.
Track length	6.45 m	21.2 ft.
Tram speed	2.1 kph	1.3 mph

MAST

	Metric	Imperial
Mast	Designed with rectangular structural tubing & design verified by structural FEA calculations	
Mast raising cylinders	2	
Angle drilling	0° to 20° in 5° increments	
Hoist / Winch	30.2 kN	6,500 lbf.
Mast locking	2 hydraulic actuated pins	
Pipe loader	1 pod loader	
Pipe size	194, 219, 245, 273 mm	7.63, 8.63, 9.63, 10.75 in

FEED SYSTEM

	Metric	Imperial
Feed type	Hydraulic motor w/ Heavy duty roller chains	
Pulldown force	444 kN	100,000 lbf.
Feed speed	0-42.6 m/min.	0-140 fpm
Pullback force	178 kN	40,000 lbf.
Chain adjustment	Manual – grease cylinders	

ROTARY HEAD

	Metric	Imperial
Rotary power	193 kW	260 HP
Standard (120 rpm)	15,320 Nm	11,300 ft.lbs
Low speed (100 rpm)	18,440 Nm	13,600 ft.lbs
High speed (150 rpm)	12,337 Nm	9,100 ft.lbs
Bullshaft thread	5.5" API Reg.	

OPERATOR'S CAB

	Metric	Imperial
Certification	FOPS (ISO 3449 Level II)	
Sound level	80 dB or less	
Operator's seat	Fully adjustable and swiveling, lumbar support, & pneumatic suspension, 3-point seat belt	
Helper's seat	With 2-point seat belt	
Camera display	Tramming and pipe handling	
HVAC (ambient range)	-40 to 50°C	-40 to 122°F
Cabin Pressurization	HEPA cabin filter with alarm	
Sunshades	Standard on all windows	
AM/FM radio	Standard w/bluetooth	

OPERATOR CONTROLS		
	Metric	Imperial
Location	Seat mounted left and right hand control panel for all drill functions	
GUI	12" touch screen display	
CONTROL SYSTEM		
	Metric	Imperial
Type	iDrill w/ SICA platform	
Safety interlocks	Functional safety interlocks for safer operation and to prevent machine damage	
DUST SUPPRESSION		
	Metric	Imperial
Dust collector	198 m³/min	7,000 cfm
Water injection	3,028 l	800 gal.
Water pump	34 lpm	9 gpm
Dust hood	Hyd. Cylinder actuated dust door and curtains	
STANDARD FEATURES		
Lighting	LED lights	
Central lubrication	Automatic	
Thread lubrication	Operated from cab	
Chain lubrication	Operated from cab	
Cameras	2 for tramming, 2 for pipe handling	
Safety features	Emergency stops near all ladders and on main electric enclosure; Pull type cable stop on mast, Fuel fill isolator on fluid service center	
Fluid service center	Remote fill points: Fuel, Engine coolant, Hyd. Oil, Central lube, Chain lube Remote drain points: Engine oil, Engine coolant, Hyd. Oil, Compressor oil, Pump drive oil	
Strobe lights	2 (on mast and on frame)	
Oil Sampling	Live SOS sampling points for: Engine, Compressor and Hydraulic oil, Engine coolant	
Diagnostics package	Sensor package for key hydraulic pump parameters for the ease of troubleshooting	

OPTIONS

	Metric	Imperial
Radio remote	For tramming and hoist	
Mast access	Infill on mast w/ mast access ladder	
Machine access ladder	Self levelling hyd. stair	
Wash reel	Pressure water wash hose reel	
Bit lube	115 lit.	30 gal.
Deck crane	For bit handling	
Fire suppression	Sandvik Eclipse wet fire suppression system	

ARCTIC PACKAGE

	Metric	Imperial
Generator	25 kW	33 HP
Electric heaters	Hydraulic oil, Chain lube, Pump drive, Compressor oil, engine oil, battery warmer	
Fuel fired heaters	Engine coolant, Water	
Fluid warmer	Fuel	
Insulation wrap	On water pump	
Arctic enclosure	Steel enclosure to cover engine, compressor and hydraulic area with LED lighting inside	
Water purging	Automatic purging system to prevent water freezing during idle, maintenance and shutdown	

AUTOMATION & TECHNOLOGY FEATURES

iDrill Performance	Auto level Auto Mast Adaptive Auto Drill
iDrill Navigation	High precision TIM 3D navigation
Automine®	Remote Readiness Line of sight Control Room Autonomous
Connectivity	Onboard Knowledge box ® (4G / LTE , Wifi) 3rd party – Rest API, UDP and Wenco interface
Office solutions	MySandvik Onsite MySandvik Insight MySandvik Productivity

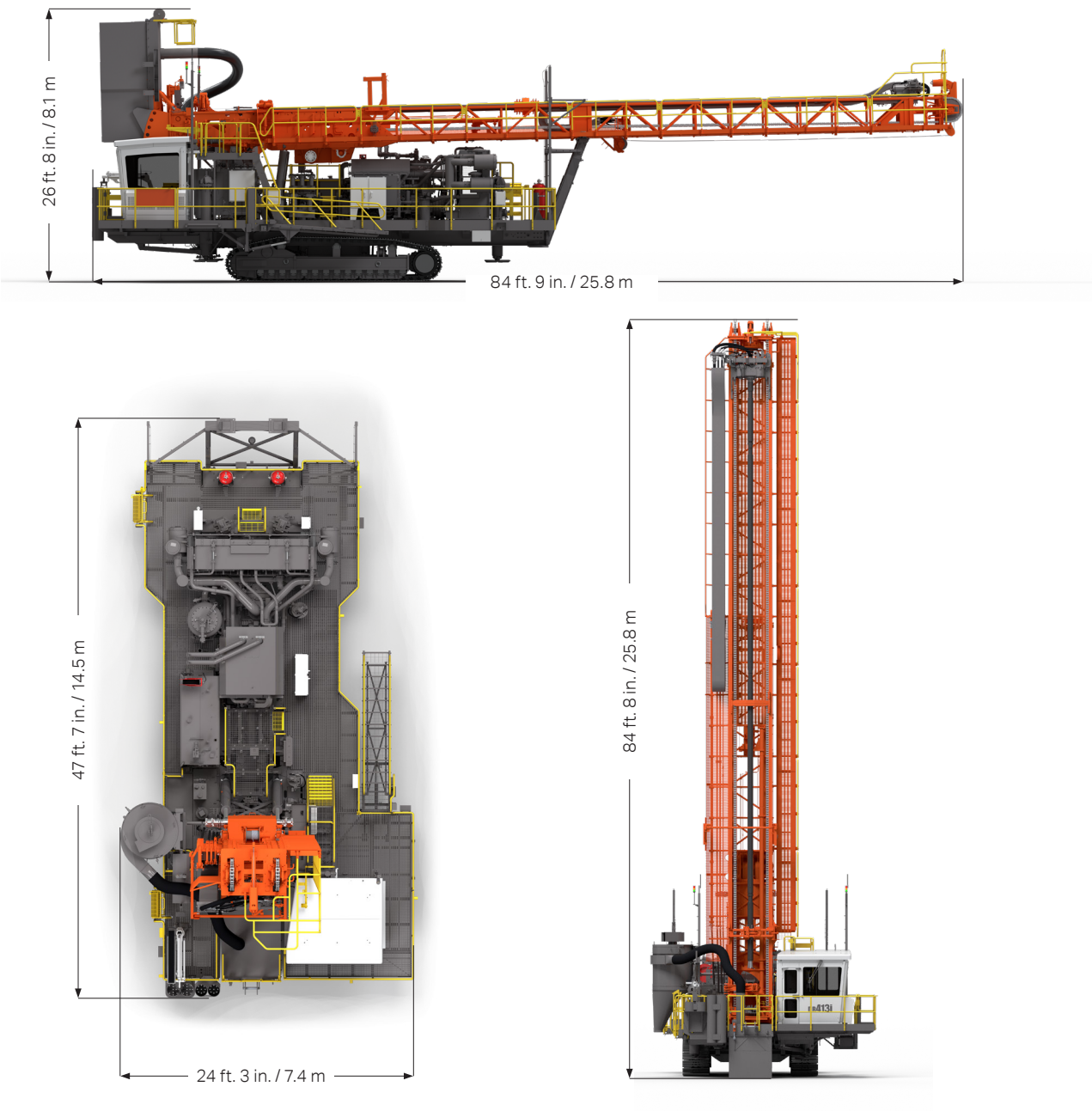
DIMENSIONS

	Metric	Imperial
Length – Mast up (w/o genset deck)	14.5 m	47 ft. 7 in.
Length – Mast up (w/ genset deck)	15.2 m	50 ft. 0 in.
Length – Mast down	25.8 m	84 ft. 9 in.
Height – Mast down	8.1 m	26 ft. 8 in.
Height – Mast up	25.8 m	84 ft. 8 in.
Width	7.4 m	24 ft. 3 in.

WEIGHT

	Metric	Imperial
Estimated operating weight	116.5 – 127 tonnes	257,000 – 280,000 lbs.

Dimensions are per engineering drawings; actuals may vary slightly. Weights are approximate and subject to change without notice. All performance figures are theoretical and at 100% systems efficiency.



Sandvik Mining and Rock Technology reserves the right to make changes to the information on this data sheet without prior notification to users. Please contact a Sandvik representative for clarification on specifications and options.