Sandvik DR410i

Rotary / DTH blast hole drill



Sandvik DR410i is a diesel-powered, self-propelled, crawler-mounted blasthole drill for surface mining. It is standard equipped for rotary with optional down-the-hole (DTH) hammer drilling power.

Higher productivity through innovation
Sandvik DR410i uses a CAN bus controlled hydraulic system to monitor the machine, allowing for timely preventative maintenance while delivering higher availability.

Rugged design
Sandvik DR410i is equipped to drill 152 to 251 millimeter (6 to 9.88 inch) diameter blastholes with first-pass capacity of 14 meters (46 feet) or multi-pass capacity of 46.6 meters (153 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 ergonomically designed cab includes controls and touchscreen integrated into the operators seat and a safari-style roof to keep the cab cooler.

Easier access
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 DR410i 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 volume and pressure to maximize efficiency and reduce fuel burn reducing your carbon footprint and extending engine and compressor life.

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Performance	
Hole diameter	152 – 251 mm / 6.00 – 9.88 in
First pass hole depth (Std. Mast)	Up to 10 m / 33 ft.
First pass hole depth (Ext. Mast)	Up to 14 m / 46 ft.
Max. hole depth (Std. mast)	Up to 46.6 m / 153 ft.
Max. hole depth (Ext. mast)	Up to 32.3 m / 106 ft.
Pull down force	Up to 222 kN / 50,000 lbf.
Weight on bit	Up to 26,308 kg / 58,000 lbs.
Power group	
Engine options:	
CAT C18 (Non Tier 4)	521 kW / 700 HP
Cummins QSK19 (Non Tier 4)	567 kW / 760 HP
CAT C27 (Tier 4)	652 kW / 875 HP
Compressor options:	
Rotary drilling	45.3 m^3/min @ 6.9 bar / 1,600 CFM @ 100 psi
DTH drilling	41 m^3/min @ 24.1 bar / 1,450 CFM @ 350 psi
Fuel tank	1,514 l / 400 gal.
Ambient operating range	-40° to 50°C / -40° to 122°F
Hydraulic system	
Reservoir capacity	757 l / 200 gal.
Frame and integral jacks	
Main frame	Designed with wide flange beams and design verified by structural FEA calculations
Walkways	Slip resistant FRP grating on all maintenance areas
Leveling jacks	4
Pad diameter	762 mm / 30 in
Pad to ground clearance	560 mm / 22 in
Undercarriage	
Model	S31HD
Track shoe width	750 mm / 29.5 in
Track shoe type	Triple grouser
Width over tracks	3,867 mm / 152.25 in
Track length	5,437 mm / 210.5 in
Tram speed	2.3/3.4 kmph / 1.4/2.1 mph

Mast	
Construction	Designed with rectangular structural tubing and design verified by structural FEA calculations
Angle drilling	0 - 30° for std. mast 0 - 20° for ext. mast
Hoist	17.8 kN / 4,000 lbf.
Pipe loader	4 pod loader for std. mast (all pipe dia.) 2 pod loader for ext. mast (all pipe dia.)
Pipe size	114 mm / 4.50 in, 127 / 5 in, 140 mm / 5.50 in, 152 mm / 6 in, 165 mm / 6.50 in,178 mm / 7 in, 194 mm / 7.63 in
Pipe length	9.1 m / 30 ft.
Feed	
Feed type	Twin cylinders with heavy duty roller chains
Pull down force	Up to 222 kN / 50,000 lbf.
Feed down rate	0 – 25.6 m/min. / 0 – 84 fpm
Pull back force	106.8 kN / 24,000 lbf.
Feed up rate	0 – 33.5 m/min. / 0 – 110 fpm
Chain tensioning	Manual - standard Automatic - option
Rotary head	
Model	MRH 10
Rotary power	112 kW / 150 HP
Speed	0 - 160 RPM
Bull shaft thread	5.50 in API REG.
Operator's cab	
Certification	FOPS rated (ISO 3449 level II)
Sound level	80 dB or less
Operator's seat	Fully adjustable and swiveling with lumbar support, pnuematic suspension and 3 point seat belt
Helper's seat	With 2-point seat belt
Camera display	Tramming and pipe handling
HVAC (ambient)	-40° to 50°C / -40° to 122°F
Cabin filtration	HEPA filtration with pressure / CO_2 monitoring system
Sunshades	Standard on all windows – retractable
AM/FM radio	Standard w/ bluetooth

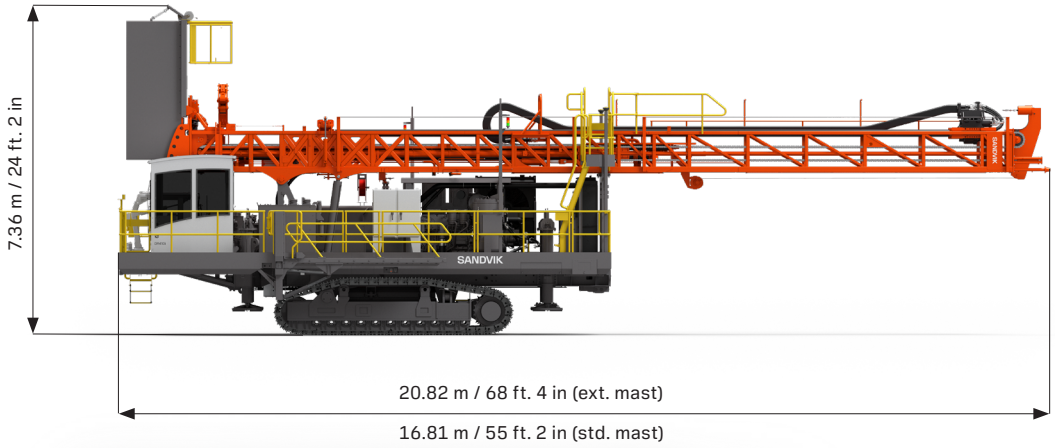
Operator's controls	
Location	Seat mounted left and right hand control panels for all drill functions
GUI	Seat mounted 12" touch screen
Dust suppression	
Dust collector	127 m³/min. / 4,500 CFM
Water injection (w/ DC)	757 l / 200 gal.
Water injection (w/o DC)	1,893 l / 500 gal.
Water pump	34 lpm / 9 GPM
Dust hood	Hyd. cylinder actuated dust door and curtains
Standard features	
Lighting	LED lights for access and maintenance
Chain lubrication	Electric, operated from cab
Central grease lubrication	Electric, automatic
Thread lubrication	Electric, operated from cab
Cameras	2 for tramming 1 for pipe handling
Safety features	Emergency stops near all ladders and on main elec. 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: hydraulic oils and compressor oils
Diagnostics package	Sensor package for key pump parameters
Options	
Radio remote	For tramming and hoist
Mast access	FRP infill and lifeline on mast with access ladder
Wash down	Water wash hose reel
Hammer lube / bit lube	115 l / 30 gal.
Deck crane	For bit handling
Fire suppression	Sandvik eclipse wet fire suppression system

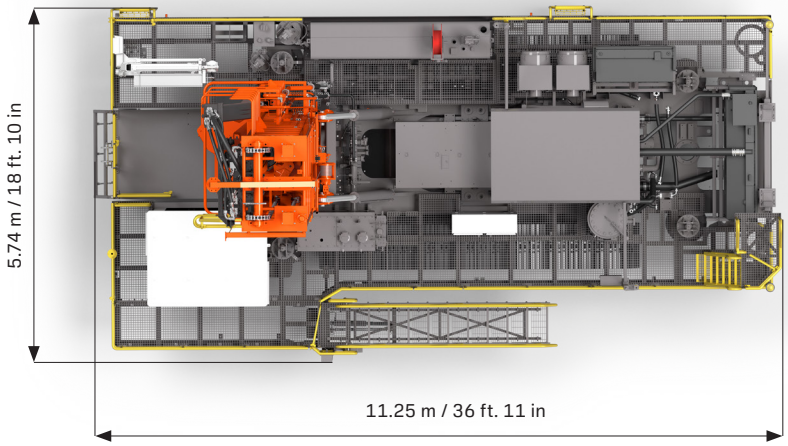
Arctic package	
Genset	30 kW / 40 HP
Electric heaters	Hydraulic oil, water, chain lube, pump drive, compressor oil, engine oil, battery warmer
Fuel fire heaters	Engine coolant
Insulation wrap	On water pump and receiver tank
Water purging	Automatic water purging system to prevent water freezing during idle, maintenance and shutdown
Automation & technology features	
iDrill Performance	Auto level Auto Mast Adaptive Auto Drill
iDrill Navigation	High precision TIM 3D navigation (Trimble / Leica)
Automine® readiness package	Line of sight Control Room Autonomous
Connectivity	Onboard Knowledge box® (4G / LTE , Wifi)
iLink interface	3rd party interface through Rest API
Digital solutions	Driller's office My Sandvik Onsite My Sandvik Productivity Remote Monitoring Service

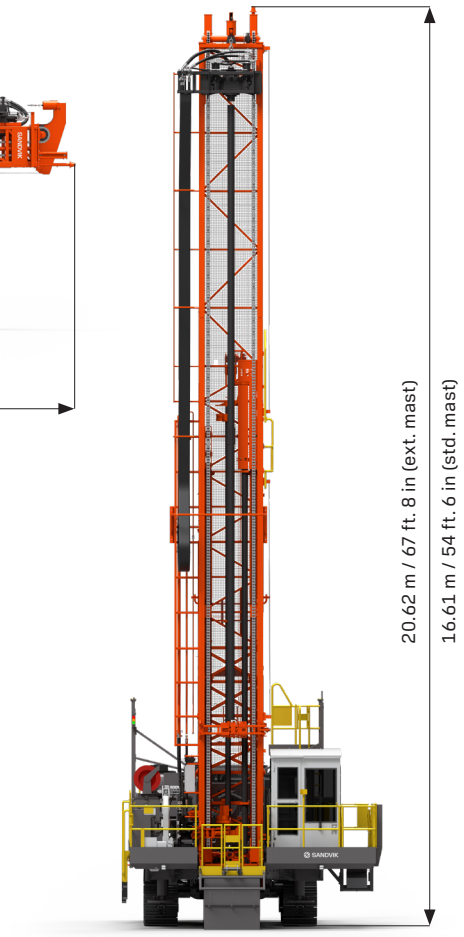
Dimensions	
Length - Mast up	11.25 m / 36 ft. 11 in
Length - Mast down (std. mast)	16.81 m / 55 ft. 2 in
Length - Mast down (ext. mast)	20.82 m / 68 ft. 4 in
Height - Mast down	7.36 m / 24 ft. 2 in
Height - Mast up (std. mast)	16.61 m / 54 ft. 6 in
Height - Mast up (ext. mast)	20.62 m / 67 ft. 8 in
Width w/ additional deck	5.74 m / 18 ft. 10 in
Width w/o additional deck	5.74 m / 18 ft. 10 in

Weight	
Estimated operating weight	63.5 - 70.3 tonnes / 140,000 - 155,000 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.







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