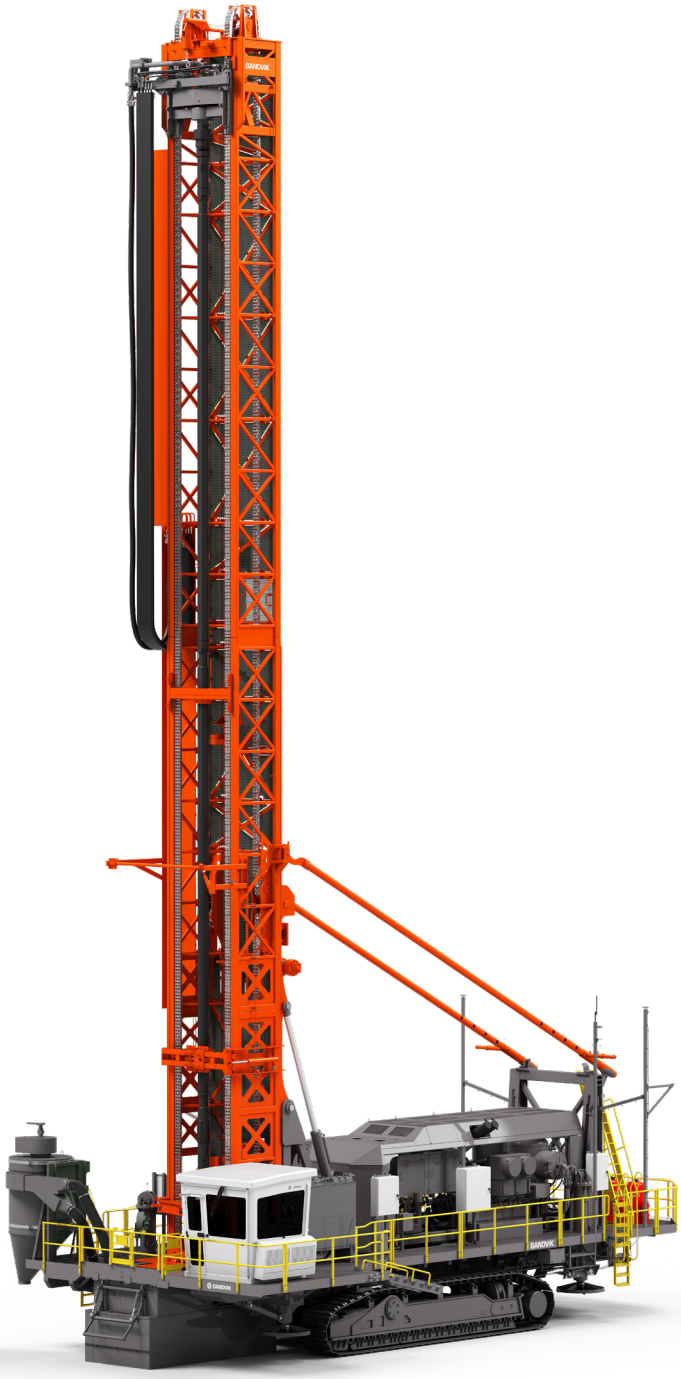
Sandvik DR416i

Rotary blast hole drill



Sandvik DR416i 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 DR416i uses a CAN bus controlled hydraulic system to monitor the machine, allowing for timely preventative maintenance while delivering higher availability.

Rugged design
Sandvik DR416i is equipped to drill 270 to 406 millimeter (10.63 to 16 inch) diameter blastholes with first-pass capacity of 21 meters (69 feet) and a total depth capacity of 42.4 m (139 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
Wider, 360-degree walkways enable superior drill access for routine maintenance. An optional hydraulic main-access stairway can be optionally installed to offer a parallel step for accessing and exiting the drill.

Designed with safety in mind
We designed Sandvik DR416i 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.

SANDVIK

Performance	
Hole diameter	270 – 406 mm / 10.63 – 16.00 in
First pass hole depth	21 m / 69 ft.
Max. hole depth	42.4 m / 139 ft.
Pull down force	534 kN / 120,000 lbf.
Weight on bit	65,770 kg / 145,000 lbs.
Power group	
Engine options:	
Cummins QSK50 (Tier 4 / Non Tier 4)	1,118 kW / 1,500 HP
Compressor	109 m^3/min @ 5.9 bar / 3,850 SCFM @ 85 psi
Fuel tank	3,407 l / 900 gal.
Ambient operating range	-40° to 50°C / -40° to 122°F
Hydraulic system	
Reservoir capacity	1,514 l / 400 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	1,219 mm / 48 in
Pad to ground clearance	622 mm / 24.50 in
Undercarriage	
Model	S61HD
Track shoe width	750 mm / 29.50 in
Track shoe type	Double grouser
Width over tracks	5,460 mm / 215 in
Track length	8,670 mm / 341.34 in
Tram speed	1.6/0.8 kmph / 1/0.5 mph

Mast	
Construction	Designed with rectangular structural tubing and design verified by structural FEA calculations
Angle drilling	0 - 20°
Hoist	30.2 kN / 6,500 lbf.
Pipe loader	2 pod loader (only for 8.63-10.75 in. pipes)
Pipe size	219 mm / 8.63 in, 235 mm / 9.25 in, 273 mm / 10.75 in, 324 mm / 12.75 in 340 mm / 13.38 in
Pipe length	10.67 m / 35 ft.
Feed	
Feed type	Hydraulic motor with heavy duty roller chains
Pull down force	534 kN / 120,000 lbf.
Feed rate	0 – 41.1 m/min. / 0 – 135 fpm
Pull back force	258 kN / 58,000 lbf.
Chain tensioning	Manual - grease cylinders
Rotary head	
Model	MRH 16
Rotary power	238 kW / 320 HP
Speed	0 - 180 RPM
Bull shaft thread	7.63 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 system	-40° to 50°C / -40° to 122°F Standard – Single system Optional – Dual system
Cabin filtration	HEPA filtration with pressure / CO_2 monitoring system
Sunshades	Standard on all windows – retractable
AM/FM radio	Standard w/ bluetooth

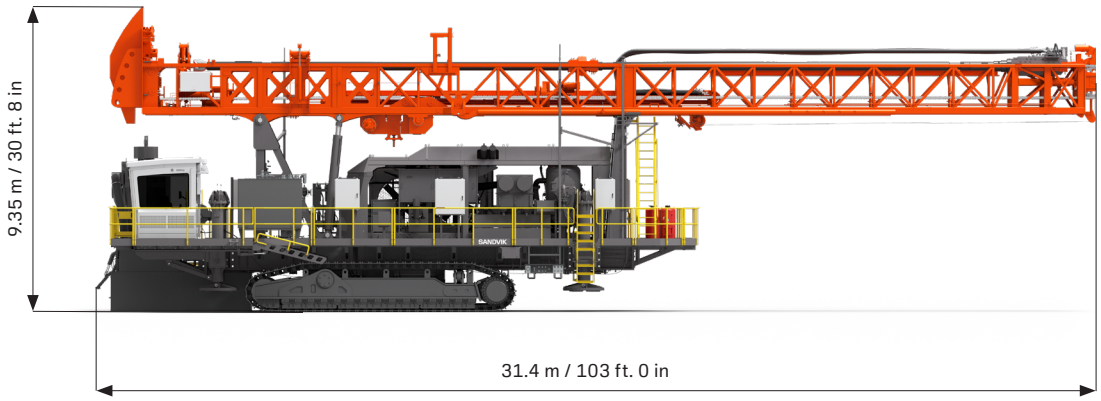
Operator's controls	
Location	Seat mounted left and right hand control panels for all drill functions
GUI	Seat mounted 12" touch screen
Dust suppression	
Dust collector	254 m^3/min. / 9,000 CFM
Water injection (w/ or w/o DC)	3,407 l / 900 gal.
Water pump	34 lpm / 9 GPM
Dust hood	Hyd. cylinder actuated dust door and curtains
Standard features	
Lighting	LED lights for access and maintenance
Chain lubrication	Operated from cab
Central grease lubrication	Automatic
Thread lubrication	Operated from cab
Cameras	6 for tramming 2 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 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

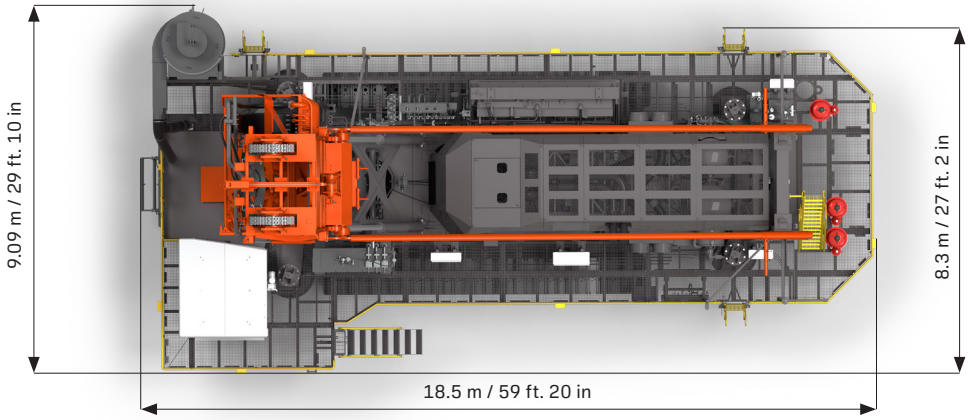
Arctic package	
Genset	25 kW / 33 HP
Electric heaters	Hydraulic oil, water, chain lube, pump drive, compressor oil, engine oil, battery warmer
Fuel fire heaters	Water, engine coolant
Insulation wrap	On water pump and receiver tank
Arctic enclosure	Steel enclosure to cover engine, compressor and hydraulic area with LED lighting inside
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

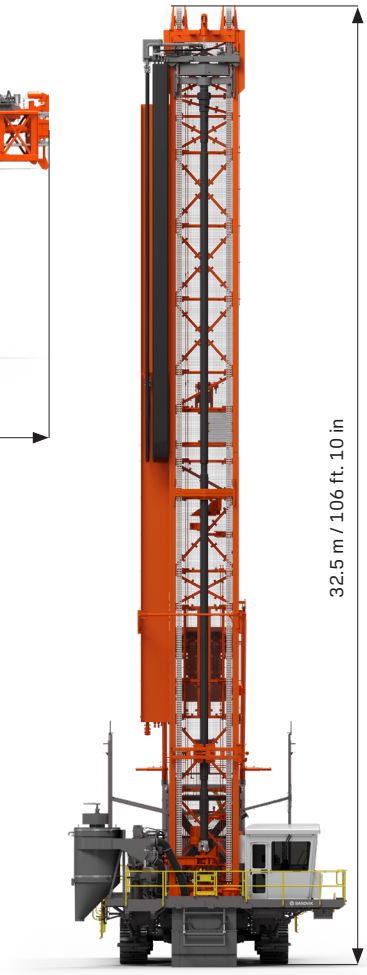
Dimensions	
Length - Mast up	18.5 m / 59 ft. 20 in
Length - Mast down	31.4 m / 103 ft. 0 in
Height - Mast down	9.35 m / 30 ft. 8 in
Height - Mast up	32.5 m / 106 ft. 10 in
Width w/ dust collector	9.09 m / 29 ft. 10 in
Width w/o dust collector	8.3 m / 27 ft. 2 in

Weight	
Estimated operating weight	190 – 219 tonnes / 430,000 – 483,000 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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