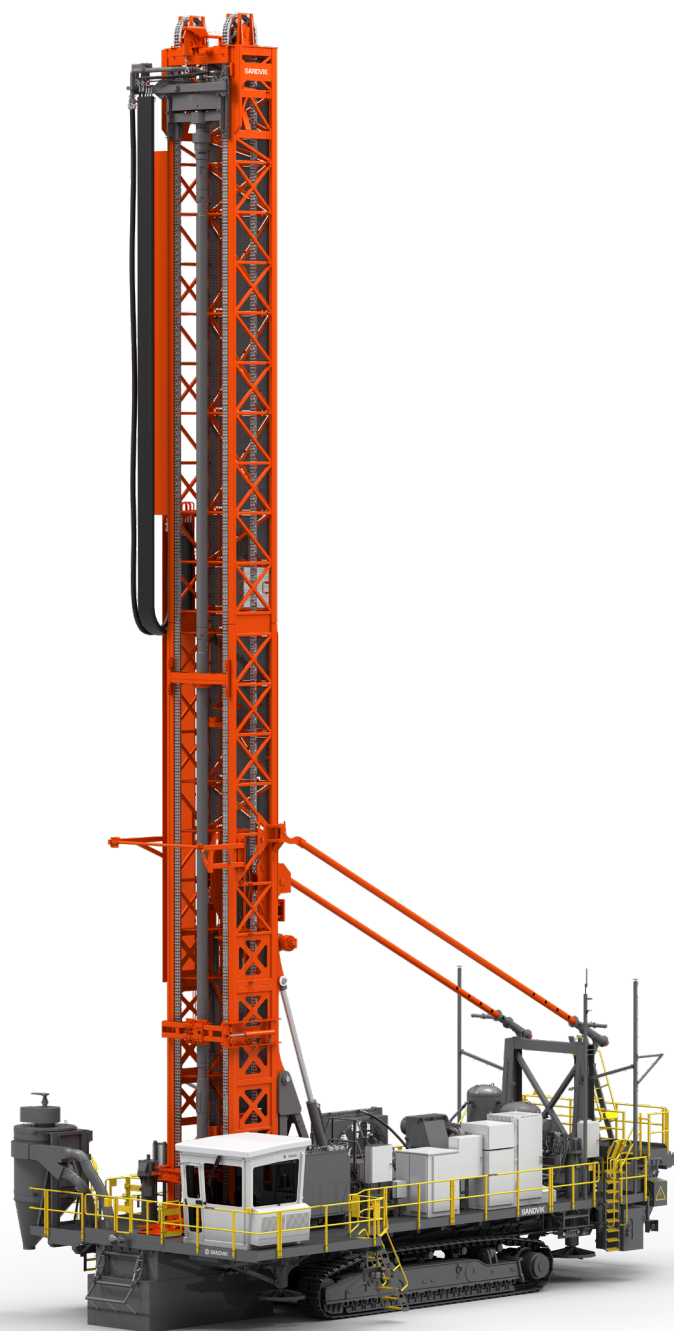


Sandvik DR416iE

Rotary blast hole drill



Sandvik DR416iE is electric-powered, self-propelled, crawler-mounted blasthole drill for surface mining. It is standard equipped for rotary drilling.

Higher productivity through innovation

Sandvik DR416iE uses a CAN bus controlled hydraulic system to monitor the machine, allowing for timely preventative maintenance while delivering higher availability.

Rugged design

Sandvik DR416iE 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 and service operations.

Designed with safety in mind

We designed Sandvik DR416iE 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 extending compressor life.

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	
Electric motor	ABB – 1044 kW / 1400 HP
Operating voltage	4,160 – 7,200 V
Operating frequency	50 / 60 Hz (Compressor output differs based on the frequency)
Soft starter	Standard
Cable reel	420 m / 1,378 ft. (cable not included)
Compressor	109 m³/min @ 5.9 bar / 3,850 SCFM @ 85 psi
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° for ext. mast
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, pneumatic 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 / CO₂ 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 m³/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: Hyd. oil, central lube, chain lube Remote drain points: Hyd. oil, compressor oil, pump drive oil
Strobe lights	2 (on mast and on frame)
Oil Sampling	Live SOS sampling points for: hydraulic 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

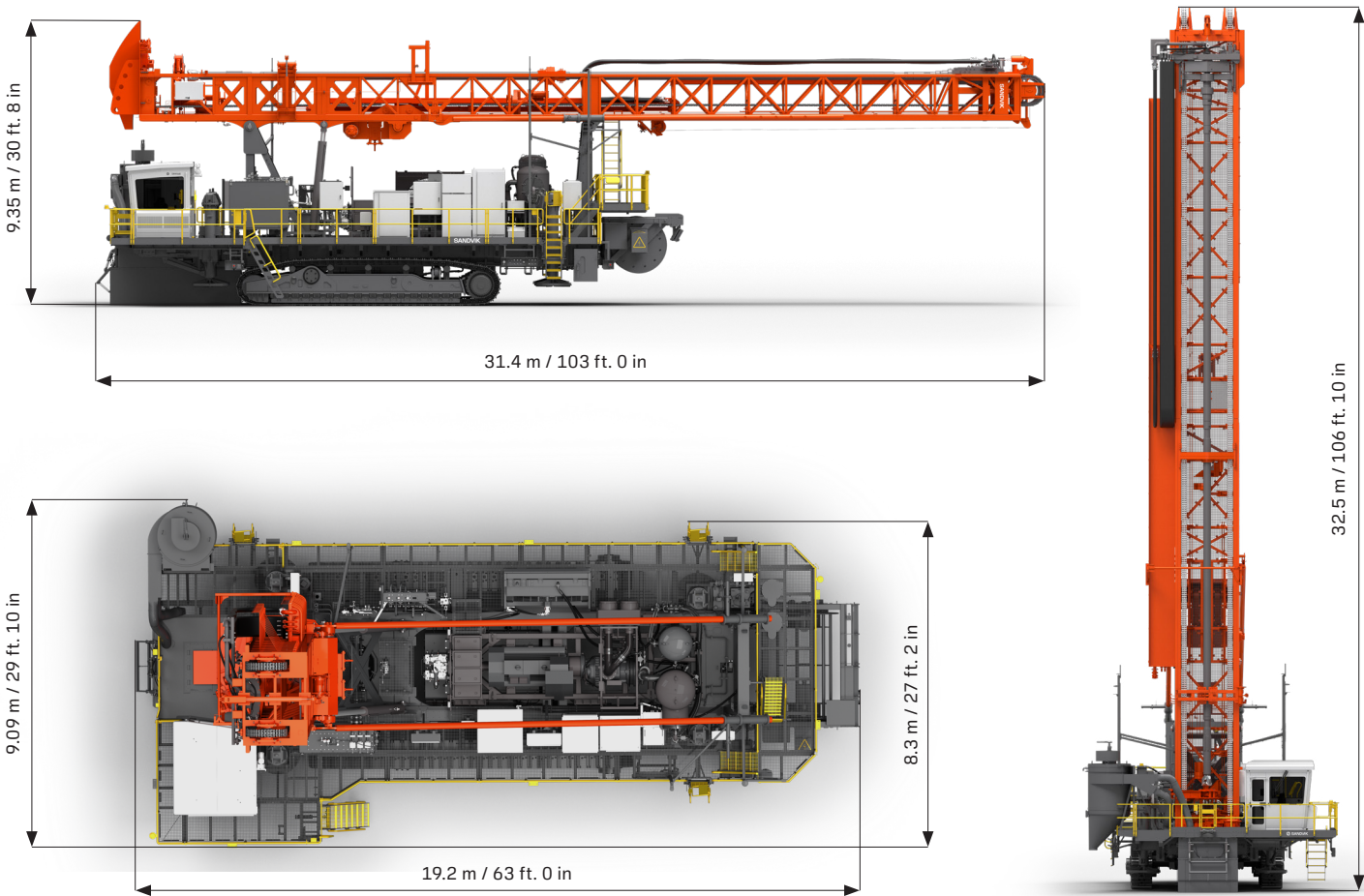
Arctic package	
Electric heaters	Hydraulic oil, water, chain lube, pump drive, compressor oil
Insulation wrap	On water pump
Water purging	Automatic water purging system to prevent water freezing during idle, maintenance and shutdown
Automation & technology features	
iDrill Performance	Auto level Auto 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	3 rd party interface through Rest API
Digital solutions	Driller's office My Sandvik Onsite My Sandvik Productivity Remote Monitoring Service



Dimensions	
Length - Mast up	19.2 m / 63 ft. 0 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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