

SANDVIK

DR416i

BIGGER. SMARTER. STRONGER.





ENGINEERING SOLUTIONS SINCE 1862

Sandvik's long history of innovation informs everything our 40,000+ employees do across the globe. Started by Göran Fredrik Göransson in a small Swedish village over 150 years ago, Sandvik has grown to a worldwide high-tech engineering group thanks to our commitment to delivering solutions and creating quality products. We design tools for the mining and construction industries with a focus on our three core tenets: safety, productivity, and value. Thanks to our strict adherence to these guiding principles, every Sandvik product is one you can depend on to do a job safely, efficiently, and at reduced cost to your operation.



THE DR416i

The Sandvik DR416i blasthole drill is designed to improve efficiency and deliver dependable penetration in the world's harshest mining conditions. The DR416i is one of the most cost-effective 16" blasthole drills on the market and delivers a single-pass capacity of 21m/69ft, the longest single-pass mast in its class. Constructed for large-diameter rotary drilling, the DR416i is automation-ready, scalable, and built to deliver reliability while bringing a new level of safety and productivity to any operation. It's also equipped with our patented Compressor Management System (CMS) that reduces fuel consumption and improves productivity. The three key principles that led the innovative design efforts that brought the DR416i to life are safety, productivity, and value.

SAFETY

Protection is a priority

Personnel safety is emphasized in every Sandvik product, and the DR416i is a prime example. A number of features are implemented to protect operators and maintainers while minimizing risk in the dangerous environments where drilling is often conducted. We design our machines not to just to meet safety regulations and standards, but to exceed them. The blueprint for the DR416i is focused on space, accessibility, visibility, and automation to ensure personnel safety and return on the owner's investments.

Top Safety Features

- Easy-Access 360° Walkways
- Four Egress Points vs One For Competitive Models
- Ergonomic Cab Environment Reduces Operator Fatigue
- Easy-Access to Mast Components
- Patented Deck Wrench Allows Bit Change With No Bit Basket Handling
- Computer-Controlled Hydraulics

PRODUCTIVITY

Deliver performance with key features

Designed with a mix of durability and innovation, the DR416i achieves optimal availability and productivity through a number of features. The wide range of hole sizes allows for the DR416i to be adapted to your specific needs. The heavy duty feed system works in tandem with our revolutionary rotary head design to deliver higher penetration rates and more holes per shift. Additionally, a number of automated features work to decrease maintenance and troubleshooting time in order to provide more predictable performance. Thanks to these productivity-oriented features, the DR416i is one of the most effective and adaptable blasthole drills on the market.

Top Productivity Features

- Patented Inertia Rotary Head Higher Instantaneous Torque
- 71,668 kg (158,000 lbs) Maximum Bit Load
- Dual Feed Speeds for Greater Drilling Control and Faster Retract
- Auto-Levelling and Auto-Drill
- Lower/Raise Mast with Rotary Head and Pipe at Top of Mast
- Traveling Centralizer for Straighter Holes

VALUE

Reduce costs with increased efficiency

The DR416i is equipped with a number of features that improve the efficiency of your operation while also cutting costs. This increase in value is made possible by our CMS, an innovative addition integrated to the DR416i that isolates the compressor to save thousands of gallons of fuel per year and reduce your carbon footprint. In addition to the CMS, the DR416i is built for easy maintenance in order to ensure your drill is always up and running. Mast walkways and accessible platforms allow for ease of service. Advanced troubleshooting via the controls system helps you identify many problems before you pick up a wrench.

Top Value Features

- Automation-Ready to Add Features When Ready
- Easy Maintenance with Monitoring Tools
- Revolutionary Compressor Management System
- Independent Cooling Cores for Quick Replacement
- No-Rust Fiberglass Reinforced Grating
- Mast Struts Increase Component Life
- Industry-Leading Engine Life (up to 30,000 hours)



KEY PRODUCT FEATURES

01

DRILLING CAPABILITY

Designed to perform to your specifications.

- 270 - 406mm (10 5/8 - 16in) Diameter Blasthole
- Single-Pass Capacity of 21m (69ft)
- Two-Pod Loader for Maximum Depth of 42.4m (139ft)

02

AUTOMATION

Increasing productivity through automated features.

- Auto-Levelling
- Change Drill Bit without Operator Contact*
- Auto Mast Set Up
- Optional Auto Drill

03

OPERATOR ENVIRONMENT

Ensuring comfort and safety are top priority.

- FOPS Tested to meet ISO 3449 Level II
- Full Visibility of Drilling Operation
- Function Lockout Fail-Safe Programming
- Touchscreens for Ease of Operation

04

ACCESSIBILITY & MAINTENANCE

Improving serviceability through ease-of-access.

- Easy-Access 360° Walkways
- Hydraulic Actuated Main-Access Stairway*
- In-Cab Maintenance Features
- Open Design with Walkways for Safe, Easy Maintenance
- Filter Change Station with Collection Trough

05

CMS

Our solution to the inherent inefficiencies of blasthole drilling.

- Isolates Compressor Reducing Engine Load
- Reduces Wear and Tear on Engine and Compressor
- Reduces Fuel Consumption
- Extends Maintenance Intervals
- Reduces Greenhouse Gas Emissions

06

CUSTOMIZATION

Built with a wide range of needs in mind.

- Custom builds available for conditions ranging from extreme cold to intense heat

**Denotes optional feature*

DR416i



SCALABLE AUTOMATION

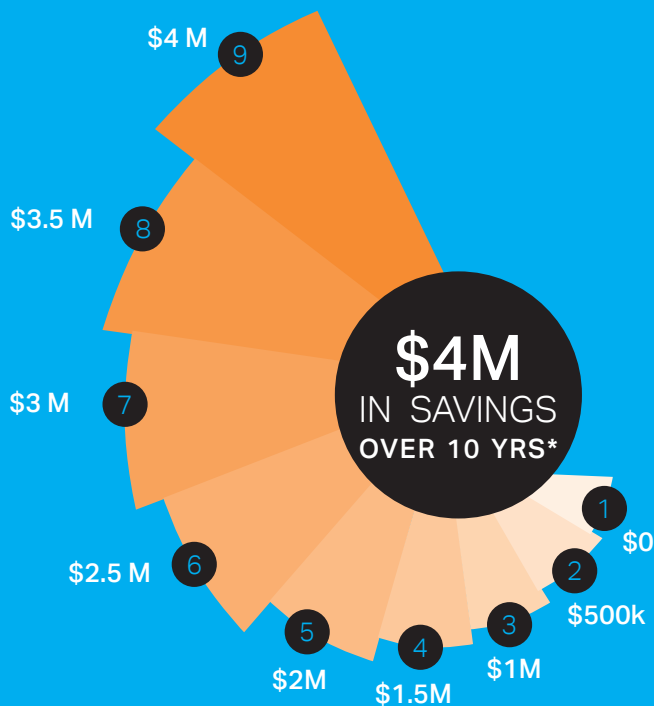
| | INTELLIGENT DRILL | DRILL NAVIGATION AND OPTIMINE® | AUTOMINE® (TELE-REMOTE) SURFACE DRILLING |
|------------------------------------|---|---|---|
| INCREASE PRODUCTION | <p>Consistent drilling performance</p> <p>Automated functions for fast and reliable rig control</p> | <p>Accurate drilling for excavation efficiency: easier blasting, improved fragmentation, bench accuracy, water control, quality of walls</p> <p>Optimized drilling scheduling with real-time data</p> | <p>Continue drilling over shift changes</p> |
| REDUCE COST | <p>Extended drill bit and drill rig lifetime</p> <p>Efficient diagnostics to minimize downtime</p> | <p>Better bench floor saves equipment and less bench preparation</p> <p>Faster decision making with real-time production data</p> | <p>Multi-drill control by one operator</p> <p>Less operators to train</p> |
| IMPROVE HEALTH & SAFETY | <p>Ergonomic cabin with easy to use controls</p> | <p>No need for hole markings and thus less people visiting bench</p> | <p>Operator out of hazardous environment</p> <p>Reduced exposure to noise, dust and vibration</p> |



INCORPORATING OUR REVOLUTIONARY CMS SYSTEM TO BOOST PRODUCTIVITY.

Sandvik's patented CMS solves the inherent inefficiencies of rotary blasthole drills that have a direct connection between the engine and compressor. Isolating the compressor reduces the load on the engine by eliminating the need to maintain pressure when the machine is not drilling.

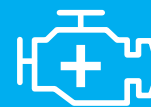
IN ADDITION TO REDUCING THE CARBON FOOTPRINT OF MINES AND DRILL SITES, THE CMS MAKES A TANGIBLE IMPACT ON PRODUCTIVITY.



*actual results may vary depending upon operating conditions.



REDUCED CARBON EMISSIONS



INCREASED ENGINE AND COMPRESSOR LIFE

20-35% LESS FUEL CONSUMPTION



MAINTENANCE intervals EXTENDED

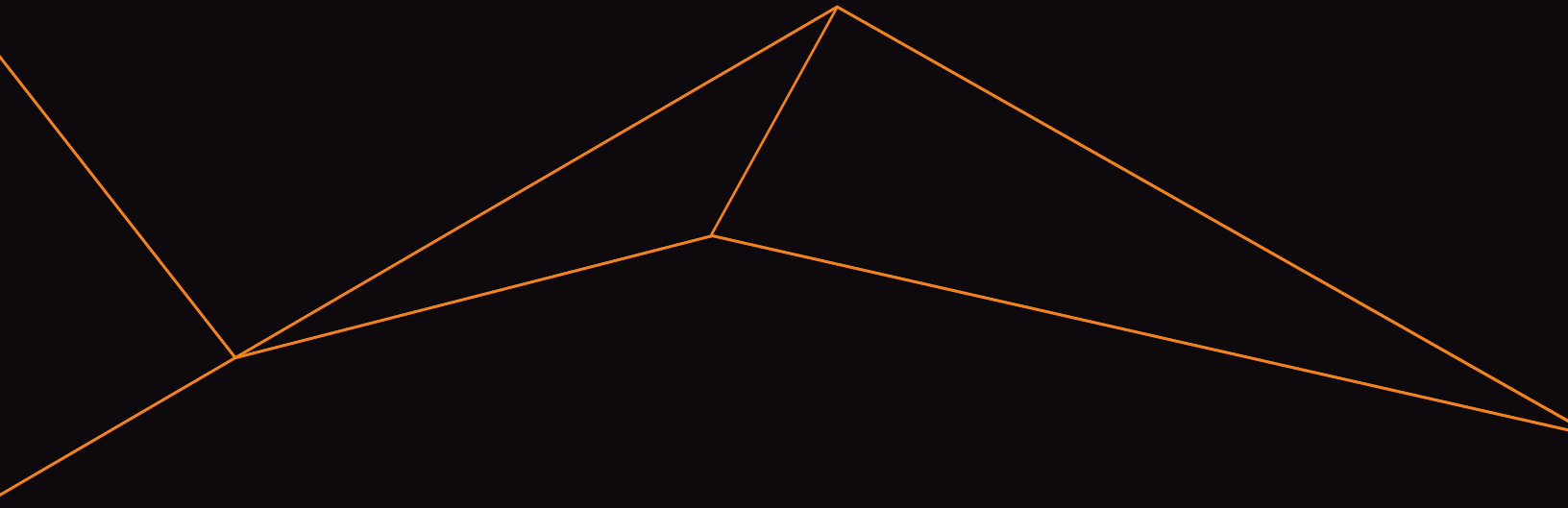


MACHINE SPECIFICATIONS

DR416i

| | METRIC | IMPERIAL |
|--------------------------------------|-------------------------|---------------|
| Hole diameter | 270-406 mm | 10 5/8 -16 in |
| Maximum hole depth | 42.4 m | 139 ft |
| First pass capability - single-pass | 21 m | 69 ft |
| FEED | | |
| Maximum pulldown | 534 kN | 120,000 lbs |
| Maximum bit load | 703 kN | 158,000 lbf |
| Feed rate up/down - single-pass | 0 - 41 m/min | 0 - 135 fpm |
| ENGINE, CUMMINS QSK50 TIER II | | |
| Power | 1,118 kw | 1,500 hp |
| Low pressure | 109 m ³ /min | 3,850 scfm |
| Rotary | 5.5 bar | 80 psi |
| HOIST | | |
| Hoist rate | 0 - 41 m/min | 0 - 135 fpm |





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