

MINING & CONSTRUCTION



MECHANIZED ROCK EXCAVATION WITH ATLAS COPCO - NO. 2/ 2012



Mine and staff development

Exploration co. works in sensitive areas

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Atlas Copco

EDITORIAL



As the new kid on the block, please allow me to introduce myself. I'm the new General Manager for Atlas Copco Mining and Rock Excavation (MR) business area. My wife Sue and I are Australian. I started in the mining industry as an 18-year-old 35 years ago and have been with Atlas Copco for the past 17 years.

This is our second expatriate assignment. Before arriving in Canada early this year, I had the wonderful experience of working throughout South East Asia for six years, our base being in Bangkok, Thailand. The experience there, strangely enough, has better prepared me for this assignment. South East Asia is similar to Canada in size, and the diversity I see in mining and construction activities is just as varied.

We feel privileged to be here in the wonderful, vast, exciting country and, having been welcomed so warmly, we sincerely hope this will be our home for many years to come.

Atlas Copco has decentralized and grown its footprint across Canada with main hubs now in Vancouver, Winnipeg, Montreal and Sudbury—where we have 20 percent more employees now than before moving our administration from Sudbury to Mississauga near Toronto. Branches extend from Prince George in BC to Pasadena in Newfoundland. Our new Yellowknife office is expected to open by September and Wabush before yearend.

Our vision remains “First in mind—First in Choice®,” so our mission is to grow and be where our customers are based and working. Our philosophy is, we can serve you best if we are close.

Please don't hesitate to contact me or any of our dedicated staff throughout Canada. Finally, I hope you and your families enjoy this beautiful season.

Andrew Lyon
General Manager
Atlas Copco Mining and Rock
Excavation Technique, Canada

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See Atlas Copco's focus on mining at MINExpo, Sept. 24-26 in Las Vegas, USA. Booth 2121 in the North Hall.

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MARKETPLACE

Check out some of our new equipment in the mining sector

MINING & CONSTRUCTION CANADA

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Atlas Copco



PROFESSIONAL DEVELOPMENT

'Boutique' mining company puts people first »



» **T**echnica Mining of Sudbury, Ontario, originated as an underground construction and maintenance contractor specializing in ore handling installation, repair and maintenance. In 2010 Technica had the opportunity to add underground mechanized development to its repertoire. To do so, it needed big equipment fast at a time when equipment manufacturers were still wary of ramping up production in the sluggish post-recession recovery. With support from Technica's long-time relationship with Atlas Copco, the company's newest service offering was up and running in record time.

Diversity is opportunity

Founder and CEO Mario Grossi said Technica Mining is about people first, pointing out that the expansion would help to ensure steady work for his employees. With the addition of mechanized development to Technica's portfolio of expertise and service offering, Technica is now able to offer turnkey service solutions to their clients.

Technica is a complete package for mines—a convenient contractor most knowledgeable of the drift they developed to the ore passes, bins, chutes, crushers, conveyors, loading pockets, shafts and headframes most

common for underground production. For Technica, it's a tag-team operation that helps it fulfill its promise of steady employment.

"I don't want to be the biggest; I want to be the best employer," said Grossi. "And that comes from valuing friendship, family ... core values. We're after that boutique quality, the intimacy of a mom and pop operation, even with 240 people."

Technica is currently busy at an underground nickel/copper mine in the Sudbury Basin, contracted to drive drifts 16 feet high by 16 feet wide in 14-foot advances per day in their assigned headings at depths of 5,200 feet. Technica's development fleet includes many Atlas Copco products: three remanufactured 8-yard Scooptrams (two ST8Bs and one ST8C), a Scooptram ST1510, two ST710 Scooptrams, three new Boomer 282 jumbo face drills, a rebuilt Boomer 322, and a Minetruck MT436.



“I don't want to be the biggest; I want to be the best employer. And that comes from valuing friendship, family ... core values.”

Mario Grossi
Founder and CEO, Technica Mining

Relationship is key to success

As rising metal prices in 2010 created a mining surge, quality equipment and skilled labor were precious commodities. Mines having lain dormant more than 30 years were reopening, and new ventures were undertaken. Companies lined up for whatever equipment became available, while headhunters relentlessly poached the best employees. Nevertheless, some of most valuable personnel in the industry joined Technica.

Grossi said he has been asked by other



Tyler Nicholls
Technica Business Manager



Jim Haas
Service and Sales Manager,
Atlas Copco Central Canada

Technica's three new Boomer 282 face drills have taken their place now alongside a brand-loyal fleet of four face drills, six Scoop-trams and a MT436 Minetruck. "Atlas Copco came through for us," said Nicholls. The manufacturer got Technica equipment on short notice to ramp up their production even as the industry was experiencing a boom that made new drills scarce.

companies how Technica can attract and maintain such a quality workforce in these times without using some of the aggressive tactics of those other companies. He said he believes his company's historical emphasis on people first is a fundamental principle some organizations may have forgotten. "Company leadership is about balancing safety, rules, relations, performance—all of these are basically about people. Our managers," he said, "stay in touch with the workforce and understand what motivates them."

It's Technica's management team that's the difference. Francois Velleux, manager of operations, Tyler Nicholls, manager of finance and technical services, and Grossi himself at 40, 33 and 38 years old respectively, are naturally able to relate to their young workforce while mutually understanding the values of sustainability.

Nicholls explained how relationships are truly fundamental to life at Technica. "More and more of the available workforce are candidates under 30. We care about what's important to them and want to help them reach their career objectives."

He said that focusing on each employee's goals and professional development is ultimately good for everyone.

Grossi also speaks highly of Francois Velleux, Technica's manager of operations. "Frank is a tremendous asset. At only 40 years old, he has accumulated invaluable ex-

perience at such a proportionately young age and is able to pass on his expertise and knowhow to the rest of the Technica team."

Efficiency with Atlas Copco

Relationship is also rooted in Technica's choice of equipment manufacturers. Jim Haas, Atlas Copco service and sales manager for Canada's central region, has known Grossi since before Grossi started Technica Mining. Haas and Grossi remember speaking of a day when Technica would be in a position to offer mechanized development as part of their portfolio of services and how Atlas Copco would be there to support them. Today, that time has come, and Haas and Atlas Copco have delivered.

Nicholls shares his team's appreciation of Atlas Copco's customer service. "Our construction drill steel has always come from Atlas Copco. We wanted to ramp up to offer mechanized development within six weeks of our decision to do so. Atlas Copco came through for us." Others, he explained, had equipment delivery lead times of up to 48 weeks for face drilling rigs, scoops or haul-trucks.

Technica's preference for staying with Atlas Copco as its primary manufacturer creates an operation-wide uniformity, even down to outfitting Technica's mechanized bolters with

Founder and CEO Mario Grossi said his goal for Technica is to be the best company to work for. It shows in the company's leadership in safety: 34 straight months without incident, and formal recognition from the Mines and Aggregates Safety & Health Association (MASHA) in both 2008 and 2009.

Atlas Copco rock drills.

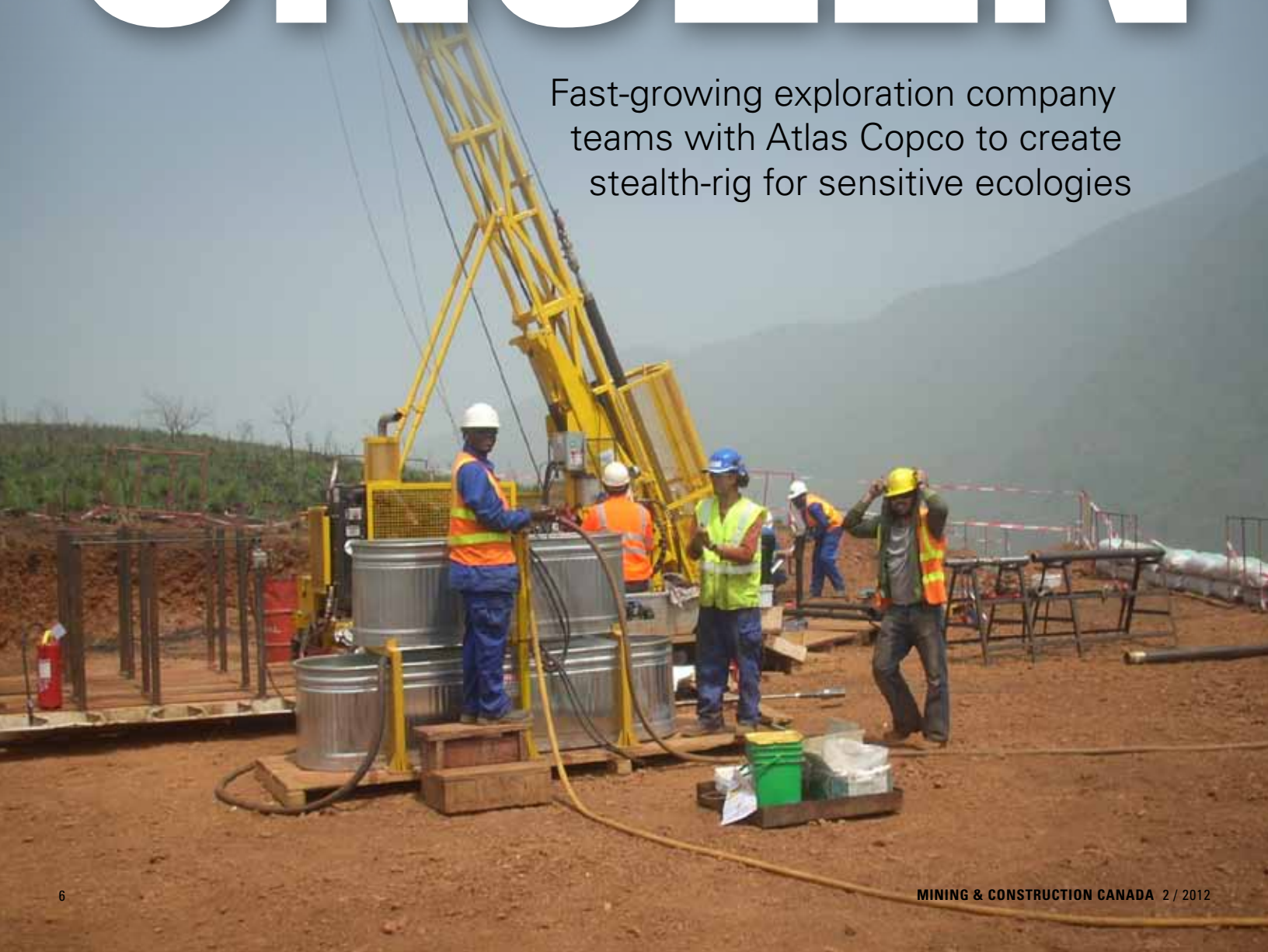
"They are smaller versions of the drills on our new Atlas Copco jumbos. It keeps things the same for our mechanics. The guys like them. I'm hearing from them that they are faster, better," Nicholls said.

Technica's faith in Atlas Copco's service is evidenced by its integration of Atlas Copco products in all aspects of its mechanized development—from the brand new jumbos, scoops, trucks and drill steel, Technica can count on its relationship with the entire team at Atlas Copco. ☉



SITE UNSEEN

Fast-growing exploration company
teams with Atlas Copco to create
stealth-rig for sensitive ecologies





Energold Drilling Corp. is a leading specialty drilling company servicing the mineral and energy sectors in the Americas, Africa and Asia. Energold specializes in mineral exploration in remote locations with limited infrastructure. Such locations require the smallest footprint possible going in, leaving as little or no evidence on their way out.

Energold's rigs can be transported by helicopter or manually on footpaths as narrow as one meter. They set up quickly and then are struck and packed out, with any sign of their presence quickly disappearing behind them. Energold has teamed up with Atlas Copco and its team of engineers in North Bay, Ontario to design small rigs capable of drilling to a variety of depths, as required for each project.

Robert Neil is the product manager for Atlas Copco Canada's exploration drilling lines. When he learned of Energold's requirements, the Atlas Copco CS1000 P4 came to mind right away. At only 7,000 pounds wet fly-in weight, the CS1000 P4 was already one of the most portable of all commercially manufactured exploration rigs. In the PQ and HQ sizes that Energold will typically drill with the rig, it can go to 305 and 460 meters, respectively. However, in BQ, it will go as deep as 1,070 meters. Its 3.9-liter, four-cylinder

Cummins diesel engine provides 86.5 kW (116 hp) of power for 6,030 kg of thrust and 9,070 kg of pull. It is geared to pull cores at 45 meters per minute.

Neil knew right away that the P4, an industry-proven design, could achieve the depths Energold was intending to reach. "Our thoughts were to provide a custom trailer, based on the stock item, which could be divided into four modules that met the weight and size requirements," Neil said.

Exploring the globe

Based in Vancouver, Energold is an explosively fast-growing company, earning recognition as one of Canada's fastest growing companies in 2009, 2010 and 2011 by Profit Magazine and placed in Business in Vancouver's Top 100 Fastest Growing companies four times. Just six years after its incorporation, Energold expanded from six rigs to 230 rigs, operating in 22 countries. The company has also recently diversified through several corporate acquisitions to provide customers with mineral drilling, oil sands drilling; water well drilling and drill rig-manufacturing services.

The company's reputation has not been built solely upon its award-winning environ-

mentally sensitive operations. It has gained attention for its dedication to social responsibility. The company has donated water wells and has helped build roads and bridges. Energold is socially responsible, with a corporate policy to hire local laborers as drillers' helpers, with the opportunity to advance their skills to become helpers and eventually experienced drillers and drill supervisors.

Ryan Davidson, Energold Operations, said one of the greatest decision factors in working with Atlas Copco was timely response. When Energold solicited bids from manufacturers for a research and design project, Atlas Copco responded within the hour and continued the dialog periodically throughout the day with calls and emails. Davidson said other companies took two or more days to respond.

Ken Breen, Atlas Copco sales representative to British Columbia, invited Energold executives to meet the engineers at North Bay and to see the facilities firsthand. That kind of attention sold Energold on Atlas Copco's commitment to work with them.

Customer-led design

Neil said, "Using the stock CS1000 P4 rig as a base, a number of personnel from Ener- »



» gold and Atlas Copco consulted on a regular basis over a six-month period to define the exact weights and dimensions that could be economically achieved.” Once they agreed upon its design parameters, the concept was sent for engineering approvals.

Neil explained that Energold personnel and a client’s safety consultant visited the North Bay factory to view the stock rig and share ideas on technical issues that may arise in the application of the finished product. Design changes emerging from those visits were incorporated into the working drawings.

Once satisfied with the proposal, a prototype was built. The result was a new four-part modular CS1000 P4 design. A custom modular trailer was fabricated and all major components were transferred from a stock rig with some modifications made to assist with the disassembly, transport and reassembly of the rig in the field.

Neil said the project did present some challenges for Atlas Copco. “Numerous safety features were added to the rig due to site safety requirements. These upgrades had to be reviewed at the North Bay factory by representatives of Atlas Copco, Energold and the consultant for the client, at whose site the rig would be operating. Some of the required

safety items were not common to the drilling industry and had to be designed and implemented as the project progressed.” These included such items as a hydraulic valve interlock system to prevent chuck rotation whenever the feed guard is open, as well as extra guarding around the hoists, engine, hydraulic tank, mud mixer and rod holder to conform to Energold’s and its client’s specifications.

The first four of these rigs, which went to West Africa on a mineral exploration contract, have been drilling typically with PQ and HQ sized bits of various manufacturers to a depth of between 300 and 350 meters. Davidson said ground conditions have been “very tough,” so the Guinea contract “has had above average drill bit usage and slow drilling with a lot of downtime due to client regulations.” In consideration of these things, he believed the Guinea project was unlike their typical contracts to be a fair example of what the drilling rigs can do in penetration rate and drill-meters. Energold has seen more than 2500 meters a month from one of its CS1000 rigs.

They have not needed to break the rig into its components on this contract. However, Energold had several clients interested in

The CS1000 P4 is shown at work for Energold in Guinea, West Africa.

Ryan Davidson (above) on an Atlas Copco TH60 drilling rig, one of 12 that the rapidly growing company acquired when it purchased Bertram Drilling Corp. Now a wholly-owned division of the Energold Drilling Group, Bertram is headquartered in Carbon, Alberta, and is a leading oil and gas drilling services company providing oil sands coring, shot hole seismic and geothermal drilling services. Bertram also provides diamond and pipeline drilling services.

the rig right away with the promise of many more orders in the future. The four-part modular version of the CS1000 P4 that Energold helped design is already proving to be a hit in Guinea. With the ever increasing demand for Energold’s services, this new rig should prove to be a grand slam for Atlas Copco’s exploration offerings in this burgeoning specialty market. ☉

PDAC

Promising Outlook of Industry



If the waves of people moving in and out of the Metro Toronto Convention Centre at the 2012 PDAC were a reflection of the exploration and mining industry, the state of the business is very bright in Canada. The prospectors, developers and investors showed up in force this year with a record number of attendees, around 33,000.

Atlas Copco had a strong showing in its booth promoting the Diamec U4 core drill and its many core drilling attachments and consumable products. The new booth display offered the product and sales staff the opportunity to get their hands on the equipment and to also see a video of the products in operation.

PDAC gave Atlas Copco Mining & Rock Excavation Technique (MR) Canada an opportunity to introduce its newest management to the exploration industry. Andrew Lyon moved to Canada to become the new General Manager for MR from Southeast Asia where he served as General Manager for the region. Lyon said, "I'm very impressed with everyone here in Canada. I would put the expertise here up against any other organization I've been involved with in my years with Atlas Copco."

Lyon also said the show was a great opportunity to meet a lot of new customers in one location. "I've traveled around Canada meeting customers since arriving here, but this was a great place to meet many more customers."

The biggest change to Atlas Copco's Geotechnical Drilling and Exploration line in Canada is the move of Mario Bureau to the position of business line manager. This is a new structure to the Canadian sales organization meant to give customers synergies with the overall sales organization of Canada.

Changes within Atlas Copco at the manufacturing level will also affect Canadian customers. Martin Sommers, long time business line manager for Geotechnical Drilling and Exploration, then marketing manager for rock reinforcement products in Canada, has moved to Marsta, Sweden, to become the new vice president for capital equipment. Along with that change, Daniel Misiano will be returning to North Bay as the new vice president of consumable products. These assignments took place May 1.

Also visiting PDAC this year was Atlas Copco's new Geotechnical Drilling and Exploration division president, Victor Tapia. Attending PDAC gave Tapia a chance to meet some of his former customers in Mexico and Latin America. "It's great to meet new people but also reconnect with old friends," said Tapia. ☉



From Left: Victor Tapia, Martin Sommers, Andrew Lyon.

MINE EXPO 2012 INTERNATIONAL



With 12 halls and outdoor areas, the mining industry will have plenty of new equipment, technologies, products and services to see at

MINE expo 2012

Atlas Copco plays its cards right by helping customers achieve the highest productivity with expertly designed equipment. Atlas Copco has a few surprises in store at the 2012 event. Watch for the next generation of RCS and the launch of a new Pit Viper. Atlas Copco is also unveiling a new, top secret underground product!



See us at the show to learn about the products shown here and many more.

• Pit Viper 235

The Atlas Copco Pit Viper PV-235 is a crawler mounted, hydraulic tophead drive, multi-pass rotary drilling rig that can be configured to accommodate a wide variety of rotary and DTH drilling demands. Hole range is 6 to 9 ⁷/₈ inches diameter to depths of 240 feet. Single pass depth of 35 or 40 ft. Can be delivered with the computerized RCS (Rig Control System) to make use of such functions as wireless remote tramming, auto-leveling, auto-drilling, reporting functions and GPS navigation. A patent-pending automatic clutch option provides fuel and maintenance savings.



Learn more about the **Rig Control System** and simulator training in an actual Pit Viper cab.

✓ Simba M7 C

A topammer long-hole drill for the 2–3.5 inch hole diameter range. Its Rig Control System provides efficient, high precision drilling for longer consumable life. Drill parallel holes upwards or downwards up to 18 ft. apart. Low-emission, turbo-charged diesel, 4-wheel-drive articulated carrier.





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Diamec U8 APC >

Designed for deep hole drilling down to 6,560 ft. B size. Ergonomics and safety are also a consideration in the design. Exists in two basic versions, Automatic Performance Control and Pilot Hydraulic Control, available with either electric or diesel power units. Two types of Diamec U8—underground version, compact with a flexible WL-hoist (4,265 ft.) and surface version, long mast extension to handle 6 meter rods, WL-hoist (6,560 ft.).



< SmartROC D65

Designed with new, advanced automation for the 4.3–8 inch diameter hole range to a maximum depth of 177 ft. A 539 hp Caterpillar C15 engine powers the rig while an onboard Atlas Copco XRX10 compressor supplies 431 psi of pressure.

• COPROD system

Combines the speed of top-hammer drilling with the precision and long service life of the down-the-hole method. COPROD produces high-impact power with minimal wear. Since outer tubes are flush along the entire length of the drillstring, jamming is nearly impossible.

COP 44 Gold >

Atlas Copco Secoroc COP hammers have an unmatched reputation for productivity with the lowest cost per meter drilled. The COP 44 Gold is recommended for holes from 4 ⁵/₁₆ to 5 ¹/₈ inches, and the COP Gold hammer range covers up to 7 inches.



• Edge drill monitor

Atlas Copco Secoroc EDGE is the world's first continuous monitoring system that shows the driller what the bit is doing at the bottom of the hole. EDGE enables drillers to make continuous adjustments to the feed force and rotation speed, optimizing drilling from start to finish with confidence at any depth. EDGE helps drillers optimize penetration rate, extending equipment life, minimizing fuel consumption and lowering overall costs.

• QAC 1250 generator

1MW of power in a standard 20-ft. container. This unit has an electric variable speed motor-driven cooling fan for low fuel consumption. Designed for extreme weather conditions and state-of-the-art control panel.





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• QLTS 8 solar light tower

No fuel, maintenance or noise. The light tower will run for months with proper sunlight. QLTS 8 comes with a rugged frame and battery box.



◀ Hurricane Booster B4-41

The newly designed B4-41/900 with Cummins QSB4.5 engine has low emissions. Overall dimensions of only 97.5 by 70 by 67.25 inches and oversized forklift pockets make it easy to maneuver. Cold weather operation is made possible by a pre-cooler bypass system incorporated in the design.

• Booster M-41

Options for unit's prime mover include hydraulic or electric motor PTO/belt drive, and diesel engine. Capacity of 2,440 cfm at maximum discharge of 1,000 psi. Features a remote mount control panel and a digital temperature scanner.

Secoroc DTH Rocket Bits ▶

Bits feature ballistic buttons. Available in 3 ⁹/₁₆ through 4 1/2 inch diameters. Generous spacing around the ballistic buttons allows cuttings to escape easily.



• Pedestal Boom System RB600XD (with MB1700)

New Atlas Copco XD (extreme duty) series offers nine models ranging from light to heavy duty. Two- and three-boom models span horizontal reaches up to 37 feet supporting breaker weights up to 630 pounds. The PBS RB600XD is ideal for scaling and secondary breaking in mines.

▼ Boomer M2 C

A modern, hydraulic face drilling rig suitable for small to medium drifts and tunnels with cross sections up to 570 square feet. Powered by a 4-cylinder diesel engine.

• XAS 1800 JD Compressor

This powerful John Deere 6135HFC95 engine delivers 12 percent more air than the previous version. It has a larger fuel tank for more autonomy and comes with PFF standard (quality air system).



Expanding Underground

Atlas Copco has greatly expanded its underground product portfolio with the acquisition of GIA Industri of Sweden earlier in 2012. In addition to drill rigs, bolters, loaders and trucks, Atlas Copco can now offer electric haultrucks, locomotives, rail mounted shuttle cars, charging and service trucks, Häggloader continuous loaders, and complete ventilation systems.

Business Line Manager for Underground Rock Excavation Canada Lori-Anne Fleming said the addition of GIA products is exciting for the Canadian market. "There is a trend toward viewing underground mines as 'ore factories.' The high productivity capacity of the Häggloaders to remove muck from the face has generated interest in companies looking to utilize bulk and rapid min-

ing technology. The rail or rubber tired versions with bucket, arms and breaker options provide flexibility to integrate these units into existing infrastructure," Fleming said.

One of the most anticipated vehicles is the Chargetec, which will be displayed at Minexpo. Fleming added, "A remote loading version is currently operating in Argentina and is being considered for the North American market."

Bob Fassl, business area president for Atlas Copco Mining and Rock Excavation Technique, said, "The acquisition of GIA is a good strategic fit for Atlas Copco. We are entering new market segments and will be able to serve customers with an even broader product portfolio. We especially look forward to offering our customers the Kiruna Electric haulage truck with its strong en-

vironmental profile. We see great opportunities in leveraging Atlas Copco's global sales network for this and GIA's other products."

Fleming said, "There is currently a fleet of Kiruna K1050E Trucks operating in the Sudbury basin with more due later this year. These trucks average 17 kph up a 15 degree inclined ramp, fully loaded all the while requiring significantly less ventilation and generating significantly less heat and noise than their diesel counterparts. Our extensive service organization with hubs and offices across Canada is ready and eager to support the GIA products."

GIA Industri was founded in 1884 and is based in Grängesberg in the old mining region of Bergslagen in south central Sweden.

Shuttlecars—

- Carry the muck quicker
- 9 to 20 ton capacity
- Dual electric motors
- Loading from car to car, inside conveyors provide

Häggloader—

- Loads 3 to 5 cubic meters per minute
- Unique system loads the muck on to the conveyor, which then fills the shuttlecar
- Built-in sprinkler system to control dust
- Track, crawler or rubber tired versions



ANFO charging equipment—

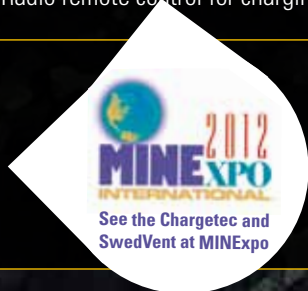
- Charging capacity up to 130 kg per minute
- Different sizes of ANFO charges
- Charging can be done with external or onboard air, electric or diesel
- Radio remote control for charging

Scaling equipment—

- Hit area from 84 meters squared to 130 meters squared
- Impact energy rating of 375, striking rate of 480 to 960 beats per minute
- Two boom systems, folded for transport or extendable
- +/- 70 degree angle working area

SwedVent—

- High pressure fans
- Also flexible ducting, underground control systems.



Locomotives—

- Diesel hydrodynamic and hydrostatic from 2 to 50 ton
- 32 kph
- Width 900 mm and up
- Easy to service and maintain

Service Trucks—

- For boom and basket or scissor lift... and many more options

Boomer E1C-DH moves projects faster

Atlas Copco's Boomer E1 C-DH face drilling rig is a single-boom, diesel-hydraulic multipurpose unit specifically designed for mines or underground construction sites lacking water and electrical infrastructure. The Boomer E1 C-DH comes with dual onboard 118 gallon water tanks and a six-cylinder, 232 hp Deutz diesel engine to drive the rig, its boom and the drill's hydraulic pumps.

The new Boomer E1 C-DH rig is one of the largest diesel-hydraulic face-drilling rigs on the market, with a coverage area of up to 1022 square feet. This is a 38 percent improvement over its predecessor, the Boomer L1 C-DH drill rig.

According to Johan Jonsson, product manager for Atlas Copco Underground Rock Excavation, the new rig provides unique advantages in the field. "The Atlas Copco Boomer E1 C-DH drill rig can be used to get started even before water and electricity are installed at the job site," he said. "Mines begin earning sooner, and contractors are able to get ahead on their schedules." Jonsson also pointed to the new drill rig's advantages in widening existing tunnels or adding bolts in older workings, as it is not necessary to install power and water infrastructure to support the rig on-site.

The Boomer E1 C-DH rig is able to handle small construction jobs more efficiently



than larger rigs, and is compact and maneuverable for tight spaces in a mine.

The multipurpose capabilities of the new rig are enhanced with the addition of the optional basket attachment. This allows the Boomer E1 C-DH rig to be used as a bolting rig and as a utility rig for drilling holes and installing ventilation ducting, among other tasks.

The Boomer E1 C-DH drill rig comes standard with Atlas Copco's Rig Control System (RCS) with the option to upgrade to an even higher degree of automation. Jonsson said, "As a member of the Atlas Copco Boomer E-series of face-drilling rigs, the new rig has access to the wide range of existing options for that established product family," which he believed to be another

important consideration for those in the market for a large diesel-hydraulic rig.

The Boomer E1C-DH was developed to meet the need for a self contained, diesel hydraulic driven rig with a large coverage area equipped with a service basket.

The rig comes with a COP 1638, COP 1838, or COP 2238 rock drill with a dual-damping system for optimum service life. The BUT 45 heavy-duty boom is equipped with a double-rotation unit for plus/minus 190-degree feed roll-over and plus/minus 135-degree feed rotation, providing the operator with fast and accurate positioning between holes. It comes with an 8 foot boom extension and 5.9 foot feed extension. The rig also has a BMH 6000 series hydraulic feed.

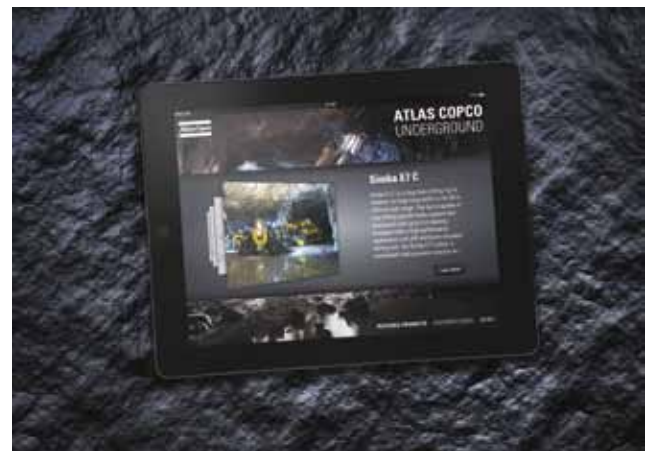
Underground app

Atlas Copco has announced the launch of a series of software apps for smart phones, tablets and other hand-held devices. The first in the series is an app available from the Apple App Store and from Google Play. After downloading the free app, users will gain access to Atlas Copco's wide range of underground face drilling rigs, loaders, trucks and other equipment.

The exclusive content in the app includes high resolution images of the products presented as 3D turntables, which enable the products to be viewed from all angles. The app will also feature video, technical data, case stories and a social news feed. In addition, all of the content can be synchronized

and then accessed offline. A GPS function can automatically direct the user to the nearest Atlas Copco office, store or representative.

Paula Blamberg, vice president of marketing communications for the Underground Rock Excavation division, says, "Due to the staggering number of new mobile devices we now see in use, and knowing the capability of these devices, we see that this technology has huge potential to simplify the way our customers, the media and other important



contacts can access our products. Information sharing has never been easier. You can easily pass on technical specifications or images with the touch of a button."

New Simbas join long-hole production fleet

Atlas Copco simultaneously launched four new Simba long-hole production drill rigs. The existing Simba rig fleet has been joined by the Simba ME7 C, the Simba E7 C, the Simba E7 C-ITH for in-the-hole (ITH) hammers, and the Simba W7 C, which is fitted with a water-powered ITH hammer for special applications.

The four stingers on the new rigs enable operators to achieve a much more secure setup and more stable positioning. The new BUT 45 heavy-duty boom is also an improvement. The stability of the BUT 45 boom increases the degree of precision and control possible. It has a 360-degree rotation, a tilt angle of plus 90 to minus 10 degrees, and a boom extension from 3.3 feet to 5.25 feet, so the coverage area is excellent as well. All of this extra stability makes the rig operation faster and more productive.

All four new Simba drill rigs are equipped with an automatic Rod Handling System (RHS) based on Atlas Copco's existing control system platform. The control system platform not only provides automation but also self-diagnostics and data logging.



Latest bolting rig achieves fast installation rate

The Boltec EC, a fully mechanized rig that features the new BUT 45 heavy duty boom, is also equipped with a new rock drill, the COP 1435. The COP 1435 delivers up to a 30 percent higher penetration rate than its predecessor, the COP 1132.

The Boltec EC installs rock bolts from 4.9 feet to 19.7 feet in length, and is designed for a hole range of 1.4 to 2.5 inches. The rig is built on a sturdy, articulated carrier with four-wheel drive.

"The Boltec EC is fast, accurate and stable, and designed for bolting in large mining and tunneling applications," explained Ed Tanner, Atlas Copco business line manager. "We are also offering several levels of optional automation that save time and improve



productivity, including features such as Bolt Angle Indication and Bolt Plan Navigation."

The BHR 20 feed rotary unit has a double rotation unit for plus or minus 190-degree feed roll-over and plus or minus 135-degree feed rotation.

In the field, the first Boltec EC rigs have already achieved an installation rate of 120 to 130 bolts per shift, and have been used to drill holes for power lines and water pipes.

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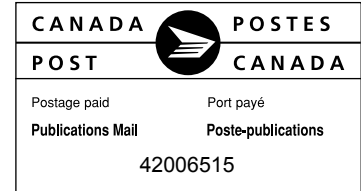
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