

MINING & CONSTRUCTION



MECHANIZED ROCK EXCAVATION WITH ATLAS COPCO - NO. 1/ 2013

Cementation in Canada and *beyond*



Combat the
rising cost of
fuel

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Pit Viper 311
latest release
in blasthole

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Purchase
correctly for
power needs

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Atlas Copco



Atlas Copco celebrates an important birthday this year—140. It’s a major milestone that makes for a perfect occasion to remind our customers that our expertise and experience can’t be beat in the construction, mining and industrial sectors.

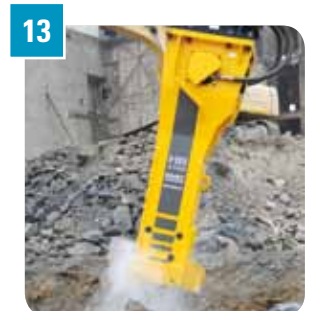
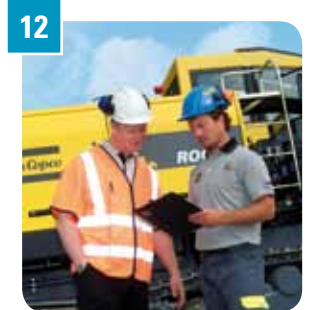
Atlas Copco started out as a locomotive and railroad manufacturer, moving on to compressed air and tools and mining equipment. Atlas Copco is now a world leader with a strong presence in Canada, thanks to our own quality workers and the renowned businesses in Canada that we are privileged to call our customers.

Locally we help increase the productivity of mines for fuels and metals, above and underground. We work on road and bridge projects and other countless developments in our country. But Atlas Copco has the distinction of powering the first North Pole expedition with its diesel engines in 1903 and of making the Panama Canal wider and deeper by this year’s end. These are just a brief mention of Atlas Copco’s reach in its long history.

Atlas Copco’s core values of interaction, commitment and innovation formed our past, created our present and will guide our future. We hope to continue to listen and understand the diverse needs of our customers while staying engaged in finding the best solution for every goal. It is our belief that there is always a better way of doing things and we’ll continue our innovative spirit to find that better way.

Cheers to what the future holds for all of our businesses in 2013 and beyond.

Anne Marie Grossi
 Branding and Communications Manager,
 Atlas Copco Mining and Rock Excavation
 Technique Canada



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Atlas Copco Mining and Rock Excavation Technique Canada
 1025 Tristar Drive
 Mississauga, ON
 L5T 1W5
 Phone: +1 (800) 465-6719
Publisher: Anne Marie Grossi
anne.marie.grossi@ca.atlascopco.com

Editor: Scott Ellenbecker, scott@ellcom.us
 Ellenbecker Communications
 30120 State Highway 264
 Round Lake, MN 56167 USA

SUBSCRIPTIONS:
Subscriptions@ellcom.us

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SAFETY FIRST
 Atlas Copco is committed to comply with or exceed all global and local safety rules and regulations for personal safety. Some photographs in this magazine may, however, show circumstances that are beyond our control. All users of Atlas Copco equipment are urged to think safety first and always use proper ear, eye, head and other protection as required to minimize the risk of personal injury.

Cementation in Canada and *beyond*

Atlas Copco Boomer M2 C face drilling rig with automated software blazes a path to increased productivity

Founded in 1998 Cementation Canada Inc. of North Bay, Ontario, quickly earned its position as a large-scale design-build mine contracting company “of choice.”

Cementation has made the list of Top 100 Employers in Canada five times. In 2012 Cementation Canada was recognized as one of the 10 Best Companies to Work For in Canada by the Financial Post for the opportunities the company offers employees for rapid career growth and the progressive stance it demonstrates with its package of employee perks and benefits.

In addition to its success at home, Cementation started up a U.S. division, which has established itself as one of the finest underground engineering, development and production contractors in the western part of the United States. Now part of the Murray & Roberts group, the largest underground mine contracting company in the world, Cementation brings to its North and South American clients the best practices from a global network of sister companies.

Growing in the U.S.

The U.S. branch has increased four-fold since establishing its offices in Salt Lake City. Contracts include mine development, personnel training and various underground installation and construction projects such as shaft sinking, Alimak raising and ore pass and dump construction.

Cementation’s U.S. president, Mike Naden, attributed the company’s rapid growth and recognition in the U.S. mining community to its proven record for operating safely, hiring highly competent people, retaining them through its genuine concern for their ambitions and needs, and of course its reputation for getting the job done on time with the highest degree of quality. The steady growth

“I consider it a huge testament to the system that a guy like me can use it. I mean, I’m just a regular old miner, but look—even I learned this.”

Mike McMillan
Cementation drilling supervisor

means he is always on the lookout for the best equipment he can acquire to meet requirements of new jobs, keeping his company competitive in the bidding process.

Recently Cementation found a way to increase quality and reduce time with one of the newest and most highly automated face drills, the Atlas Copco Boomer M2 C. Though a few other companies in North America have acquired drill rigs with similar capabilities, Cementation is the first company to fully utilize Total Station navigation in conjunction with Tunnel Manager drilling software to perform completely automated drilling.

It’s just one more testament to the company’s pace-setting adaptability, getting the most from equipment as it becomes available. Cementation, for instance, was also the first U.S. company to prove out the productivity of the new Atlas Copco Minetruck MT42 after seeing its success in Canada.



» *Mike McMillan was sent to work for Cementation USA from Canada and has mastered the Boomer to become its operator trainer and drilling supervisor there.*

» Cementation prides itself in finding the best tools for the job. In the case of finding a good LHD in the U.S., Cementation brought down a Scooptram ST1520 previously used in Canada.

Automated, not complicated

It may seem intimidating to coordinate the sophisticated Atlas Copco Boomer with Total Station and Tunnel Manager, but Cementation drilling supervisor Mike McMillan said he was impressed that it wasn't that difficult to learn.

Atlas Copco provided training for use of the systems, McMillan said. Atlas Copco sent Mike Delbridge and Sweden-based Mikael Sjoval to Cementation's project site. McMillan said he could use the program after just one day of working with it under their tutelage. Within the course of two months he had completed all the drill programming for the tunnel, all on his own: "I consider it a huge testament to the system that a guy like me can use it. I mean, I'm just a regular old miner, but look—even I learned this."

Others at Cementation challenge his modesty, considering him an exemplary employee who rapidly advanced within the company with an insatiable appetite for learning new technology. Nadon said of McMillan, "He can run any piece of equipment we have," pointing out that McMillan, who came down to work under Nadon from Cementation Canada, mastered the Boomer to become its operator trainer and drilling supervisor in a relatively short time.

McMillan said using Tunnel Manager and the Total Station navigation system has been saving Cementation untold amounts of time on the decline project he is currently working on. The job is to complete a 6-by-6-meter access with an 8-degree decline to more than 2,440 meters with a total vertical depth of roughly 305 meters. Using the Tunnel Manager program, McMillan lays out the drilling patterns. The program lets him include information such as tunnel profile, position coordinates, tunnel line and even the driller's name for each round.

When it comes time to drill, the operator drives down to the face. Once there he sets



MIKE NADON
Cementation President, U.S.

out a tripod with the Total Station receiver, or Power Tracker, mounted on it. The station triangulates with fixed points installed on the tunnel wall to calculate position in three dimensions. McMillan said it takes about 10 or 11 minutes total to drive the rig to the face, to set the tripod and to get the drilling started.

The operator inserts the Tunnel Manager file into the rig from a special memory stick. The 32-hole perimeter of the total 72-hole pattern is drilled by the operator in "semiautomatic mode," said McMillan, so that the operator can be certain everything is going to plan. If not, the driller can quickly intercede to make corrections as he notes any deviation during drilling. Deviations occur from formation characteristics that cause the drill to deflect slightly. The operator notes the degree of deviation, which the rig tells him precisely, enters a correction, and then, once the perimeter is complete, sets the rig to full automation again.

McMillan said, "Once I set up the drilling patterns, that's pretty much it."

Since the drilling is so precisely recorded, and since corrections are inputted immediately and in such small increments, the process is not interrupted by having engineers measure and calculate corrections and lay out patterns in paint for every round. It's all already in the rig's computer. Delay between rounds is dramatically minimized, and more time is spent drilling.

On this project McMillan is a drilling supervisor. Of the formation, McMillan said, "The rock is soft and forgiving, but it really isn't too bad here." Cementation bolts each advance anyway. Bolting is done mechanically with an Atlas Copco Boltec MC using 8-foot Swellex in a 4-by-4-foot pattern.

He said the company has been making 14-foot advances with 1.75-inch diameter ballistic carbide bits, placing holes in the pattern about 610 mm apart. Rate of penetration has been averaging 3 meters per minute. Cementation has advanced the face more than 520 meters already and is at roughly 76 vertical meters down.

With this project well under way, Cementation is looking at upcoming projects, locating equipment to give it an edge in the bidding process. ●



Height of cabin	3,044 mm
Height roof down	2,324 mm
Length	14,044 mm with feeds
Ground clearance	265 mm
Turning radius, outer	7,200 mm
Turning radius, inner	4,400 mm

BOOMER M2C

- **Rock drill**—COP 1838 with dual-damping system for optimal consumable life. Coverage width is 10,068 mm wide by 7,483 mm high.
- **Hydraulic boom**—BUT 35 SL heavy-duty booms for direct, fast, accurate positioning between holes. Double rotation unit has 360 degree feed rollover. Boom extension is 1,800 mm.
- **Hydraulic feed**—BMH 6900-series heavy-duty aluminum feed with high ability to bend and resistance to breaking.
- **Controls**—Advanced Rig Control System allowing several levels of automation. Integrated diagnostic and event logging system to assist in maintenance. Interactive operator panel with full-color display.
- **Carrier**—Sturdy, articulated with four-wheel drive. Powered by a 4-cylinder, EPA III (Tier3) approved diesel engine.

Atlas Copco Area Sales Manager Clay Gremel, Cementation USA President Mike Nadon, Drilling Supervisor Mike McMillan, Cementation Project Manager John Larsen, Cementation Area Manager Justin Oleson and Atlas Copco Sales Representative Dan Basanez.



Atlas Copco is once again taking the industry lead by introducing and implementing the patent-pending automatic clutch on selected surface drilling machines. Although this is new to the mining market, it is a time-proven technology that has been used in other industries.

Our engineers have developed this integrated clutch control unit that activates the clutch as an option that will help mines save on the fuel and maintenance costs, as well as contribute to helping the environment by significantly reducing the amount of fuel consumed by our machines.

If you were to study a typical drill in a surface mine, you would find it performing one of the following tasks: drilling, propelling/tramming, leveling, rod handling and idling. Until now, both the engine and compressor were running at all times for all of these functions, even though the compressor is only required to get cuttings out of the bottom of the hole during the drilling cycle.

Wouldn't it be advantageous to use the compressor only during drilling and not for the other four phases? The ability to turn the air compressor on and off as necessary would save horsepower demands on the engine. Even with air switched off, the compressor is still using 30 percent of the rated horsepower, even in standby mode. Air compressors used this way cost a mine thousands of dollars in fuel and maintenance costs, not to mention the impact of that unnecessary fuel usage on the environment.

No changes to rig or operation

Adding the clutch does not alter the machine in any way. Clutch integration has minimal effect on operation itself. Having the clutch does not require any additional inputs from the operator. The clutch can also be easily retrofitted to a machine already in the field.

To start drilling a hole the operator sets up the machine as usual, turning the air on. This sends a signal to the clutch control unit. The engine speed automatically drops to around 900 rpm as the clutch begins feathering the engagement.

When the speed of the compressor matches the speed of the engine, the engine automatically ramps back up to full speed. The compressor begins making air. All of this happens within three seconds so there is no discernable delay. Once the hole is drilled, the operator turns off the air (disengaging the compressor) and moves onto the next hole.

The following scenario utilizes the same machine drilling both single-pass and multi-pass, with and without a clutch.

Machine Model: Pit Viper 275

Airend: Low pressure 53.8 m³/min at 7.6 bar (1,900 cfm at 110 psi)

Engine: 600 kW (800 hp) Cat C27

Application: Coal overburden

Comparing two scenarios, one with the clutch and one without, working in the same rock formation, it is easy to visualize the immediate fuel savings of a single drilled hole.

Projecting the fuel savings of one hole over a mine's yearly production shows how the clutch greatly assists in reducing the mine's bottom line.

As you can also see from the chart, the fuel savings tend to increase during multi-pass drilling since the rig spends more time performing non-drilling functions compared to a single-pass machine.

The fuel savings are also higher for soft rock formations compared to hard rock formations. This is because in order to drill hard rock the machine typically spends more time drilling than handling drill pipe, ultimately consuming more horsepower and fuel than a machine used purely for rotary drilling.

Regardless of whether a mine is multi-pass drilling or single-pass drilling in a soft or hard rock formation, the potential for sizeable cost savings is substantial. In fact some preliminary studies of the option proved fuel savings of up to 30 percent.

In addition to fuel cost savings

▶ The clutch eliminates parasitic load of the compressor on the engine during start-up, specifically in cold weather environments. This ultimately increases engine and compressor life over the life of the machine.

▶ On previous configurations, the compressor did not have a dedicated hour meter. Instead, the service interval and rebuild time just

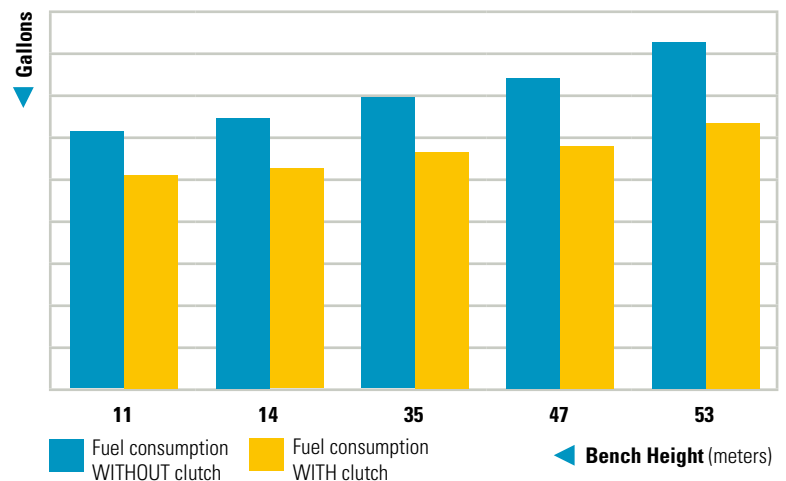
depended on when the engine had to be serviced or rebuilt. With the clutch, the compressor has its own hour meter and its own maintenance interval based on actual hours of use. This dedicated maintenance interval also saves on the cost of compressor fluid and filters.

▶ The advantage of getting any job done with less fuel is an added benefit within itself, not just for the mine but for the environment.

The combination of the clutch with Atlas Copco's large-capacity fuel and water tanks can greatly increase production time while reducing time spent on fuel and water trucks making trips down to the machine at the bottom of the pit. For example, a mine can maximize a PV-271 rig's fuel capacity up to 625 gallons and still have an 822 gallon water tank. The combination of the large fuel and the large water tanks will allow the machine to run for over 24 hours of operation without needing a refill.

Atlas Copco continually strives to ensure adherence to the highest environmental standards during the design, assembly and utilization of our machines. This welcome, additional benefit is just one within a vast portfolio of options that Atlas Copco offers on our machines, all designed and manufactured in an environmentally conscious way.

The clutch contributes to decreasing a mine's operating budget and demonstrates Atlas Copco's commitment to supporting a mine with our full complement of safety and environmental options. And helping a mine operate safely both for its personnel and for the environment is a savings we can all take home. ☺



Pit Viper 311

Atlas Copco releases the latest in successful blasthole series



The process of designing a new rig has precise steps for success. Those steps start with the customers' needs and move through marketing and engineering departments to build what ultimately fits the market's demand. In the case of the new Pit Viper, Atlas Copco looked at the need to increase efficiency of single-pass drilling in the 12-inch hole range, with 110,000 bit load. The resulting Pit Viper 311 is the first of what will eventually be the 310 series.

The name Pit Viper represents the newest generation of blasthole drills leading the industry in features and performance. Existing models in the Pit Viper lineup include

the PV-235, PV-271, PV-275 and PV-351. The new series name signifies the optimal hole size—310 millimeters (or a 9 to 12 ¼ inch range). The last numeral, either a 1 or 5, identifies whether the rig is a single-pass or multi-pass machine. The PV-311 is a single pass machine.

The new PV-311 rig's single-pass depth capacity is 19.8 meters (65 feet) or 41 meters (135 feet) with the two additional 35-foot rods in the standard internal carousel. When its multi-pass brother comes out in another year, it will have 295 feet of depth capacity. Until then, customers can order the DMM-3, the drill that the PV-310 series will replace.

The new PV-310 series offers customers many upgrades for the Pit Viper originally developed for the PV-235, but it also reflects successes from the PV-351 design. Customers who already know or own the PV-351 will appreciate the commonality of parts and design strengths. Many mines already using the PV-351 could see benefits from adding the PV-311 to their fleet.

The Atlas Copco design team focused on maintainability and high productivity by focusing on proven systems in other Pit Vipers, while improving some features. Project Manager Iain Peebles said, "Our design plan targeted lifespan savings for the customer with

everything from fuel to maintenance.”

At the project’s beginning, the marketing department listened to the customers who wanted lower costs and high production capacity. “We build a new rig from the tower down. We design to capacity, depth and hole size, then match to the length and size of the tower and work down to balance and tracks,” said Peebles.

Top down

Tower design changes will benefit customers in many ways. Blasthole Drills Product Line Manager Dustin Penn pointed out changes in the new PV-311 tower that benefit the customer, specifically the maintenance departments. “Because we have a deeper tower we can increase the size of the sheaves, which incorporates sealed bearings and operates with our auto-tensioning feature. All that adds up to increased cable and sheave life, plus this system requires less maintenance,” said Penn.

Penn said the new rotary head now operates with larger 7-cubic-inch motors that offer better lubrication for increased spline and main bearing life. The old head offered just 10,000 ft-lb of torque whereas the new head offers a substantial increase to 13,000 ft-lb (18 kNm) of torque in low speed (7,000 ft-lb in high speed).

Service work around the new tower will be easier, too. Technicians will have the benefit of a closable access hatch that fully encloses the fiber-grate catwalk along the length of the tower. Although there are no open floor spaces in the grating, technicians have the benefit of a full restraint system that allows them to clip their harnesses to the cable and walk freely throughout the tower area without having to disconnect for cable fasteners.

More choices

The PV-310 series offers several options in its single- and multi-pass versions. That starts with the engine offering. To match a mine’s preference for brand and regulatory demands, Tier 4 engines are available with the Cat C32 and MTU 16V2000 and the Tier 2 options are Cat C32, MTU 16V2000, and Cummins QSK38.

In the future both electric as well as diesel options will be available.

Air compressors are also optional in low and high pressure Atlas Copco and Ingersoll Rand models.

At the outset, Atlas Copco Twin S3 and Ingersoll Rand 2x285 mm airends will be

available, both capable of delivering 3,000 cfm at 110 psi.

An optional feature first developed for the PV-235 is also available on the new PV-311. Engineers Peebles and Tim Ledbetter developed and patented a revolutionary power control clutch system focused on saving energy.

The system allows the operator to turn off the compressor with the push of a button when not in use. To engage the clutch, the operator hits a button on the chair’s control panel to switch the air off as he begins to trip out of the hole.

Hidden productivity

One high-tech feature not optional on the new PV-311 is the rig control system, or RCS. Peebles said so many functions of automation and operation are tied to RCS that the system needed to be standard. Those optional features include auto-level, auto rod changing and tele-remote operation. Additional packages are available including auto-drilling and GPS hole navigation.

Productivity is improved with low-tech features too. The PV-311 holds up to 1,400 gallons of fuel (with 1,200 gallons of water) and 1,900 gallons of water (when optioned with 700 gallons of fuel). A mine can maximize its service crew schedules because a rig can operate a full 24 hours before fluid replenishment.

Control and comfort

There isn’t another design feature that distinguishes the new PV-311 from others in the Pit Viper family more than its cab. Peebles said the cab is the result of a year and a half of engineering that incorporates utility and comfort with high-tech control.

The operator commands the drill rig in quiet comfort. In the center of the cab under a wall-to-wall heavy duty removable mat and shaded windows, his seat offers a full view of the platform and work area. Peebles said, “We put a lot of time and creature comforts into this new cab, but it is funny how many drillers have commented on something as

“Our design plan targeted lifespan savings for the customer with everything from fuel to maintenance.”

Iain Peebles

Project Manager



DUSTIN PENN

Product Line Manager,
Blasthole Drills

simple as the integrated shades.”

High-tech features include color touchscreens that feed drilling data to the operator while additional safety monitors show movement from a ground surveillance system and video feeds from closed-circuit television cameras.

As for comfort, operators will enjoy the convenience of an optional refrigerator and microwave while they hum along to their favorite music fed through the USB connection. They will stay cool even in the world’s hottest mines with the 3.5 ton air conditioner.

The cab’s central electronics cabinet even offers benefit to the maintenance technician. Service access doors open from floor to ceiling giving full access to all electronics. The well-lit cabinet allows open spaces for technicians to maintain the existing equipment and add technology as needed.

A world of opportunity

Penn said the new PV-311 will find a home all over the world. “We’ve identified copper and coal mines in Chile, Peru, Southwest U.S., Russia and Western Canada as well as Africa and Indonesia metals mines as great locations for the PV-311.”

He also said the 295-foot multi-pass PV-315 will work perfectly in places like the United States’ Powder River Basin, Eastern Australia, South Africa, China and India coal markets. ☉

Power needs

What to consider when buying a portable generator

By Michael Marion, Product & Business Development Manager, Portable Energy Division



In today's market, there are many things to consider when buying a portable generator—and in most cases, this is a good thing. However, too much choice can also become a problem. Too many options can become overwhelming when looking to buy a machine, especially if this purchase is one of many to be done within a portfolio. Let's review a few points of consideration.

What are your needs?

Although this is a very basic question, and one that any qualified portable generator salesperson should work with a customer to refine and clarify, it is often also the most difficult to answer as there are many things to consider. To get the most out of a purchase, consider the following factors:

Usage: Is the application considered prime or standby power? Generators are rated based on continuous use (prime power) or occasional use (standby power). Consider whether the plan is to use a generator 24 hours a day, seven days a week or only in emergency situations (such as at a hospital or airport). This component of an application is very important to consider as it can drastically affect the quality and ultimately the cost of the generator. Appreciate that all generator manufacturers design, build and test their machines in relation to their target market and the applications foreseen. A generator designed for limited use is not created, built and tested in the same way for durability and efficiency as that of a unit designed for on-site power applications.

Load: Often taken in consideration when sizing the generator, it is important to understand what is going to be powered by your generator. There are many types of loads and factors that affect how the load behaves. Some things to think about:

- ▶ **Power Factor:** Three-phase generator sets are rated for 0.8 loads and single-phase units are rated for 1.0 loads. Lower power factor loads require larger alternators or generators.
- ▶ **Peak loads:** These are generally caused by equipment that frequently cycle on and off, such as cranes, heating systems or water pumps.
- ▶ **Motor loads:** Consider the size, type, starting method and operating current draws.
- ▶ **Maximum allowable voltage and frequency drops:** These are often taken into consideration when the equipment being powered is sensitive to significant variations in voltage and frequency.
- ▶ **Altitude and temperature:** Although they are not living beings, diesel engines do "breathe." Air is either more or less dense depending on altitude and ambient temperature. Therefore, engine performance can be affected by either of these two factors.
- ▶ **Voltage:** Consider the ranges required at site both in single and three-phase operation.
- ▶ **Daily power-consumption curve:** It is always a good idea to map out the daily power requirements hour-by-hour over a 24-hour period. One finding could be that instead of one big generator, two or three smaller generators in parallel may offer a reduced cost of operation as well as greater reliability and flexibility at a site.

▶ **Consultation and education:** Regardless of one's level of knowledge when it comes to generators, it is always a good idea to consult with a local sales representative to see what is new in the market. Manufacturers constantly challenge each other to innovate better ways of getting the job done. Some focus on general areas, such as reduced cost of operation, ease of use or improved reliability, whereas others excel at specific application-based offerings. Don't miss out on discovering a new way of meeting an application's specific needs.

Legislation and regulations

Regulations that control the safe operation of generators can exist at all levels of government as well as within public and private companies. As a result, it is recommended to consult with local authorities to ensure that a particular product meets the basic requirements. Here are a few questions to ask of a supplier and to review with local regulatory agencies.

Does the unit and all of its associated components meet CSA requirements? (Does the machine bear the CSA label?). This is especially important to consider when import-



ing used generators or machines produced outside of Canada.

Are there any local (provincial or city) power authority regulations that need to be met based on the application? For example, public events generally require special safety equipment.

Is the machine mounted on a trailer? If so, consider if it requires a license plate, an annual inspection or even electric or hydraulic brakes. There are also environmental considerations to be made. Although these may or may not be required by various government entities, many public and or private companies mandate these criteria.

► *Full fluid containment:* In some cases, portable diesel-powered equipment when brought to the site must have 110-percent fluid containment. This means that the frame or “tub” of the machine is capable of containing 110 percent of the fluids on board.

► *Noise:* Whether in a residential neighbor-

hood or at a concert, noise regulations may be in place to protect the public.

► *Off-road diesel engine emissions:* This is a federally regulated requirement that was released Jan. 16, 2012, by Environment Canada. The regulation specifies that all diesel engines used in off-road applications that fall within a certain horsepower range that are imported into Canada be at the Interim Tier 4 (iT4) levels for particulate matter and nitrous oxides. Although the regulation states that iT4 is the desired emissions level, it also outlined the guidelines for the importation of transition engines (similar to the U.S. EPA rules on the sale of flex engines). Transition engines are engines that only meet Tier 1 through Tier 3 levels and can only be used when specific conditions are met. Consider the following as it relates to your purchase.

- Are you an importer on record? If so, as a company you are required to file a report annually with Environment

Canada stating the number of engines imported and at what emissions levels.

- Your own company’s policies on environmental care and protection. Does your company actively pursue the most environmentally friendly technologies?
- *Costs.* Although iT4 technology costs more at the time of initial purchase, fuel consumption overall is usually better. Will the long-term operational costs outweigh the initial difference in purchase price? Also consider that some iT4 engines require low sulfur fuel and low-ash oil, as well as additional servicing of a diesel particulate filter (DPF) if so equipped.

There are many factors to consider when buying a portable generator, and customers are not alone to make the decision. Reputable manufacturers consider all of these elements and can help direct you to the right machine for your application and region. ☉

For more information, visit www.atlascopco.ca or email portable.energy@ca.atlascopco.com.

Customer satisfaction in Atlas Copco grows



Atlas Copco's efforts to increase its presence and availability to customers has made a positive difference. Customer loyalty is measured through the Net Promoter Score. Questions such as, "Would you recommend Atlas Copco?" were posed to customers.

Rejean Labelle, National Sales and Business Development Manager, said, "Last year, 2012, the Atlas Copco Mining and Rock Excavation division sent out 672 surveys to our Canadian mining and construction customers. The return rate was 35.5 percent, which is considered an excellent rate."

The results of the survey indicated positive impressions and feedback to Atlas Copco. "The initiative to get closer to our customers in the last three years is much appreciated by our customers," Labelle said. "We are told that our ability




REJEAN LABELLE
National Sales and Business
Development Manager

to deliver parts and components to customer sites has greatly improved and that technical issues are being addressed much quicker."

Labelle said that the service operations' hard work is showing. Labelle said, "We wish to thank our customers for their input. Without their feedback we are not able to make changes to better serve them. We look forward to their input again in 2013 in order to continuously enhance our services

to our Canadian customers."

It is Labelle's constant goal to have customers wait only 24 hours or less for parts delivery. In 2011, Atlas Copco Canada located head offices in Mississauga, closer to the country's largest airport and in a shipping crossroads. Additional offices across the country have opened with the intention of having key parts available even closer to where customers need them. 

Atlas Copco recognizes company for safety

Machines Roger International was honored by Atlas Copco Secoroc for its record of lowest accident lost time in 2011. The award was presented at the annual meeting of the AEMQ (Quebec Mining Contracting Association). Atlas Copco has sponsored the award for safety for more than 25 years.

Machines Roger is a drilling services company with operations in Quebec, Ontario, New Brunswick, British Columbia and in the North West Territories.

Shown here are Bernie Rouleau, branch manager of Atlas Copco Rouyn-Noranda, Quebec, Alain Beland, president of Machines Roger, and Christian St-Amour, director of international operations Machines Roger.



Atlas Copco releases new heavy breaker

The new addition to Atlas Copco's heavy hydraulic breaker line, the HB 4100, provides better performance and higher efficiency than the preceding model with less weight. Designed for carriers in the 40 to 70 ton weight class, it has a service weight of 4,100 kg but is as powerful as other, much heavier breakers.

"The improvement is considerable," explained Wayne Ross, Atlas Copco business line manager for construction tools. "We were able to achieve double-digit percentage increases in power and efficiency while maintaining the reliability that our breakers are known for."

Reduced weight and better performance means that similar results can be achieved with a smaller hydraulic breaker. A lighter breaker also means that a smaller excavator can be used, saving both investment and operating costs. A reduction in the total cost of ownership is attained by conserving resources such as man hours and fuel.

"Hydraulic breakers are subjected to use under the most extreme conditions and must endure considerable wear and tear," Ross added. "To improve reliability and reduce life cycle cost, the HB 4100 has increased wear

protection at the lower part of the hammer, including a new cover plate for the retaining bars as well as a reinforced service window. Like our other hydraulic breakers, this new model has circumferential wear protection that completely surrounds the percussion mechanism in addition to shock-dampening elements within that protective housing."

The new breaker's guide system has also been improved so that it is more stable and resilient.

The HB 4100 also includes the following standard features of the Atlas Copco heavy hydraulic breaker series:

- The VibroSilenced system protects operators against noise and vibrations.
- PowerAdapt switches the breaker off in the event of a hydraulic overflow.
- AutoControl adjusts the blow frequency and blow energy to match the hardness of the material.
- ContiLube TM II is an integrated, automatic lubrication system.
- StartSelect allows the operator to influence the startup and shutdown behavior of the hydraulic breaker.

The optional DustProtector version pro-



protects the lower part of the hydraulic breaker from dust and rock particles.

The HB 4100 hydraulic breaker is suitable for secondary and primary rock breaking in quarries, demolition of concrete, steel and pavement, trenching, dredging, tunneling and foundation work.

Atlas Copco introduces new line of light compaction equipment



Atlas Copco Construction Equipment, Canada, has a new full line of light compaction equipment. The complete range of light compaction equipment, which includes tampers, forward plates, forward and reversible plates, duplex rollers and trench compactors will be available through Atlas Copco's existing dealer and distributor network.

"The addition of light compaction products to the Atlas Copco construction tools lineup will increase brand recognition as well as enhance Atlas Copco's competitive position within the light construction market in Canada," said Wayne Ross, construction tools business line manager.

Tamper

The LT series of tampers are suitable for applications on both granular and cohesive soils, and features a low-emission, low-noise Honda 4-stroke engine. The patented, multifunctional B.E.S.T (Breather shut off, Electrical shut off, Shut off fuel and Throttle control) fuel tank ensures easy start up and optimal performance.

Forward plate

The LF series of forward plates is designed for compacting granular soils and asphalt. Designed to be an economical solution for small repair and maintenance work, the series also features a low-vibration handle to reduce operator fatigue.

Forward-reversible plate

The LG (gear) and LH (hydraulic) series of forward and reversible plates are an economical alternative to rollers. Designed to compact soil in areas like trenches and parking lots, they are also suitable for special applications like block paving and are also equipped with low vibration handles.

Walk-behind duplex

The LP series of walk-behind, or pedestrian, duplex rollers is suitable for compacting thin layers of granular soils and asphalt. The rollers can be used for small jobs, repair work and compaction in confined areas. The LP series oil cooling system and large water tank increase productivity and equipment life substantially. The LP compactor's duplex rollers are hydraulically driven with no chains or gears to increase the complexity of operation.

Vibratory compactor

The LP series vibratory trench compactor, or trench roller, is suitable for the compaction of cohesive and granular soils in trenches and confined areas. The LP trench roller can also be used for compaction work close to obstacles, thanks to no overhanging or protruding parts. A Bluetooth-based remote control version of the LP trench roller allows for multiple, individually-paired remote units to operate on site without crossover or interference.

Atlas Copco introduces the new XAS 1800 JD7 iT4 air compressor



Atlas Copco is now offering the XAS 1800 JD7 air compressor for applications requiring a very high volume of air at medium pressure. The XAS 1800 is compliant with interim Tier 4 Environment Canada and EPA emission regulations. Benefits include easy-to-use electronic controls, optimized fuel consumption and a small footprint to reduce transportation cost.

Along with an updated exterior, the XAS 1800 offers the all new XC3003 electronic controller. The large display and simple yet intuitive design provides ease of use for the operator. With help from the optional FuelXpert, a unique fuel saving system, the engine speed and air inlet valve are electronically regulated to optimize fuel consumption.

The XAS 1800 portable air compressor produces 1800 CFM at 100 psi (7 bar) and 1600 CFM at 150 psi (10 bar). The Atlas Copco Portable Full Feature (PFF) filtration system removes oil aerosol content to 0.01 mg per cubic meter and is able to break particles down to 0.01 micron at the industry's lowest pressure drop. The aftercooler reduces the compressed air outlet temperature to approximately 15 degrees Celsius over ambient for higher quality air.

Cold weather features also come standard on the XAS 1800 JD7. To ensure maximum machine performance, the portable air compressor is equipped to handle temperatures as low as -25 degrees Celsius.

High speed, tandem axle design and forklift slots allow for easy towing and help to lower transportation costs. Safety features include electric brakes that come standard, pressure displays, an emergency stop and an optional spillage-free frame.

Atlas Copco introduces new high-efficiency, environmentally friendly, portable solar light towers

To meet customer demand for highly efficient and sustainable portable lighting equipment, Atlas Copco has introduced a new generation of light towers in Canada. The new QLTS light towers run on solar-powered batteries that are charged during the day and last through the night. They significantly reduce environmental impact, operate silently and have a low life cycle cost because they don't require fuel and have no engine or alternator to maintain.

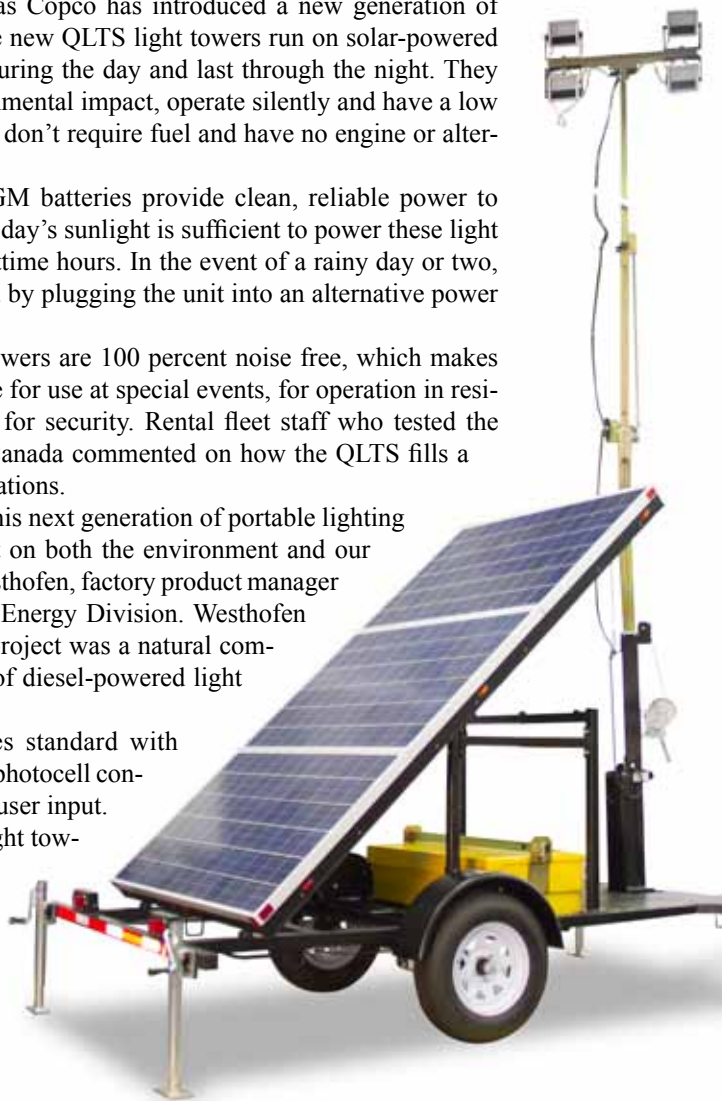
The highly efficient AGM batteries provide clean, reliable power to the LED lights. An average day's sunlight is sufficient to power these light towers throughout the nighttime hours. In the event of a rainy day or two, the batteries can be charged by plugging the unit into an alternative power source.

The QLTS solar light towers are 100 percent noise free, which makes them particularly conducive for use at special events, for operation in residential neighborhoods and for security. Rental fleet staff who tested the machine for Atlas Copco Canada commented on how the QLTS fills a market need in these applications.

"We are confident that this next generation of portable lighting will have a positive impact on both the environment and our customers," said Chuck Westhofen, factory product manager for Atlas Copco's Portable Energy Division. Westhofen added that the light tower project was a natural complement to the QLT series of diesel-powered light towers.

The QLTS series comes standard with both manual and automatic photocell controlled on/off, requiring no user input.

The new Atlas Copco light towers are available for sale this fall (Q4 2012) in North and South America and will be available to the rest of the world in early 2013.



Atlas Copco enters dimension stone industry through the acquisition of Perfora

Atlas Copco acquired Perfora S.p.A., an Italian company that manufactures and sells drilling and cutting equipment for the dimension stone industry (DSI.) Perfora is now part of Atlas Copco's Surface Drilling Equipment division. The company's products, which include diamond wire saws and drill rigs specifically designed for dimension stone applications, are distributed through direct sales and local dealers in selected countries around the world.

Directly after the acquisition, Bob Fassl, business area president of Atlas Copco Mining and Rock Excavation Technique, commented on the new addition. "Perfora is a leading supplier in this segment, with a strong customer focus and high quality products," he said. "We see good growth opportunities through this deal. As part of the Atlas Copco Group, Perfora becomes a unique global supplier of tailor made equipment for dimension stone producers."

WHERE TO FIND US

ATLAS COPCO COMPRESSORS CANADA

HEAD OFFICE:

30 Montrose
Dollard-des-Ormeaux, QC H9B 3J9
Tel: 514-421-4121 | Fax: 514-421-1950

BC	Delta	604-940-0380
AB	Calgary	403-259-6069
AB	Edmonton	780-483-7214
ON	Kitchener	519-748-2266
ON	Mississauga	905-846-9369

ATLAS COPCO MINING AND ROCK EXCAVATION TECHNIQUE CANADA

HEAD OFFICE:

1025 Tristar Drive
Mississauga, ON L5T 1W5
Tel: 289.562.0100

BC	Langley	604-607-0439
BC	Prince George	250-562-8786
SK	Creighton	306-688-3090
MB	Thompson	204-778-8005
MB	Winnipeg	204-391-6134
ON	Balmertown	807-735-1104
ON	Lively	705-673-6711
ON	Marathon	807-229-9910
ON	Timmins	705-268-5595
QC	Cadillac	819-759-3601
QC	Saint Apollinaire	418-881-0101
NB	Bathurst	506-545-7108
NL	Pasadena	709-686-5966
NWT	Yellowknife	867-446-3991

ATLAS COPCO CONSTRUCTION EQUIPMENT CANADA

HEAD OFFICE:

1025 Tristar Drive
Mississauga, ON L5T 1W5
Tel: 1-800-582-6726

For more information, please visit www.atlascopco.ca
accmc@ca.atlascopco.com 800-465-6719

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