

Versatile diamond head option latest innovation

In a continual effort to provide drills that are versatile, the Sonic Drill Corporation (SDC) now offers a diamond coring head option.

Although an SDC sonic drill can actually drill to 1000 ft in ideal conditions:

it's the pull back limitation of the air spring that limits the sonic drill to 600 ft. So, to overcome this depth limitation and hard rock formations, SDC has added a diamond coring head to the machine. Now, the operator can drill and sample through unconsolidated formations and, when hitting hard rock, set the casing and shift over to the diamond coring head to continue drilling and sampling. Using an overshot system, drilling through hard rock to 2000 ft. is now possible.

Mounted to the left of the sonic drill head, the diamond coring head is very compact yet powerful. Both drill heads are incorporated into a side shift carriage which allows the operator to shift the diamond coring head to the right and above the borehole. The diamond coring head mount also incorporates a hydraulic swing cylinder which swings the diamond coring head out of the way when running the wire line and conventional overshot retrieval system. A separate wire line winch is mounted to the backside of the mast and the wire line runs up through a separate set of pulleys in the jib arm.

When running the diamond coring tooling, much less clamping pressure and breaking force is needed so relief valves were added to the operators console so that the operator can reduce pressures and use the same hydraulic breakout table for both diamond coring and for sonic drilling. However, a small clamping table is also available specifically for diamond tooling which quickly bolts down to the top of the existing hydraulic breakout table.

The diamond coring head can deliver 466 rpm loaded / 16,800 lbs-in of torque to 1434 rpm loaded / 5,200 lbs-in torque - an innovation that has been enthusiastically embraced by both geotechnical and exploration clients who deal with a variety of different formations, all in one borehole.

More information on the new diamond coring head is available here.



Rigs primarily used for mining and mineral exploration

To date, the Sonic Drill Corporation has successfully placed sonic drills in Chile, Guyana, Peru and Argentina. In all cases, the equipment is sold and serviced from its head office in British Columbia, Canada.

However, to grow its market share, SDC is searching for a representative in South America where the drills are primarily being used for mining and mineral exploration - extracting high quality samples from gold, placer, lithium, bauxite and uranium deposits. The South American distributor will provide equipment sales, financing, parts, service and training.

If interested in this opportunity, please contact Kevin Reimer at 1-604-792-2000 ext 104 or by email.



Compact and powerful

Manufactured by the Sonic Drill Corporation (SDC), the newest sonic drill model is the SDC390-14 - the world's most powerful and compact sonic drill currently on the market today. It's fitted with a full capacity Sonicor 50K drill head, rubber tracks, 14 ft. of head travel and 225 hp. It's also physically compact enough to ship within a common 20 ft. ocean container.

Recently, SDC completed the delivery of an SDC390-14, along with on-site commissioning and training, for Cameco Corporation in Rabbit Lake, northern Saskatchewan, Canada. Cameco is a large uranium mining operation that owns three large properties in northern Saskatchewan which are all connected via public road ways.

All equipment utilized at the mine site becomes contaminated with trace amounts of uranium radiation which is enough to prevent the mine from mobilizing the equipment from property to property. The SDC390-14 solves this problem because of its small compact size which allows it to be transported within a fully-enclosed 20 ft. container from mine site to mine site.

Cameco's other specific requirement called for the sonic drill to be able to drill primarily in frozen tailings as well as install drill rods into the tailings for use as injection lines for tailings deposition. In this situation, formations varied from tailings to sandy boulder till and hard rock. In addition, 95 per cent or better sample recovery was required in all materials.

The sonic drill also had to be capable of drilling at angles 25 degrees off horizontal, automatic rod handling and operate in temperatures below -40 C. Happily, the SDC390-14 was the solution. Cameco's machine was fitted with a diesel fuel-fired heating systems to keep all systems warm. The rigs light-weight rubber tracks allowed it to tram through deep slushy tailings with ease.

When conditions were very warm and unsafe on the tailings, the drill was loaded onto a small barge and towed out into a tailings pond to drill and collect samples. SDC provided Cameco with a 3 x 5 sampling system, spare parts package and driller training for two weeks. Upon completion of the training, each driller was provided with sonic driller certification. Cameco says it is extremely happy with the speed and high quality samples from the SDC390-14. They are now considering additional machines for their other properties.

For more information on the SDC390-14, please click here.

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