

Secoroc Rock Drilling Tools

# DTH solutions for large holes



*Sustainable Productivity*





## **Secoroc DTH solutions for drilling large holes**

Atlas Copco Secoroc has been manufacturing and marketing down-the-hole equipment for more than five decades. The company's innovative streak has brought about many ingenious solutions such as Secoroc COP Gold hammers. These cutting-edge solutions have made Atlas Copco Secoroc the DTH market leader. One of our best known secrets is that we also offer a comprehensive range of DTH products in the holes range of 12" (305mm) to 120" (3048mm).





## Introducing Secoroc large hole solutions

If you are operating in bedrock, Atlas Copco Secoroc can offer the right solution for your large hole drilling operation. We have large DTH hammers in sizes 12" and 20" capable of drilling holes from 12 $\frac{1}{4}$ " (311mm) to 36" (914mm) in diameter.

Moreover, if you need to drill bigger holes, our unique cluster drill concept can take you up to 120" (3048mm) in diameter. We even have a solution for anchoring utility power poles.

*"We have DTH hammers from 12" up to 72" in diameter"*

## The right drill for the job

When the substrate is solid rock, there's no technique better than DTH drilling. Our solutions are ideal in applications such as foundation drilling, secant wall drilling, ventilation drill-

ing, horizontal urban utility drilling and drilling pole holes.

## From truck mounting to top drive rigs

Secoroc large hole DTH equipment is very flexible. It can be used on traditional DTH drill rigs, truck mounted or crane mounted top drive rig.

Moreover, for horizontal drilling you can use a skid-mounted rotation unit.

In fact, if you let us know what your drilling challenge is, we can help you design ideal large hole drilling solutions.



## Large DTH hammers

Where there's solid rock and a need for large diameter holes, then the most efficient method of drilling the holes are DTH hammers.

Atlas Copco Secoroc's range of large DTH hammers includes the Secoroc QL 120 and the Secoroc QL 200.



## Secoroc QL 120

The Secoroc QL 120 is the ideal 12" hammer when the applications conditions are tough, eg in water saturated holes or large hole production drilling. Where foundations need to be reinforced such as in secant wall drilling or horizontal drilling for urban utility drilling, the Secoroc QL 120 is the ideal tool.

The Secoroc QL 120 can has a hole range of 311mm – 559mm (12¼" – 24").

## Secoroc QL 200

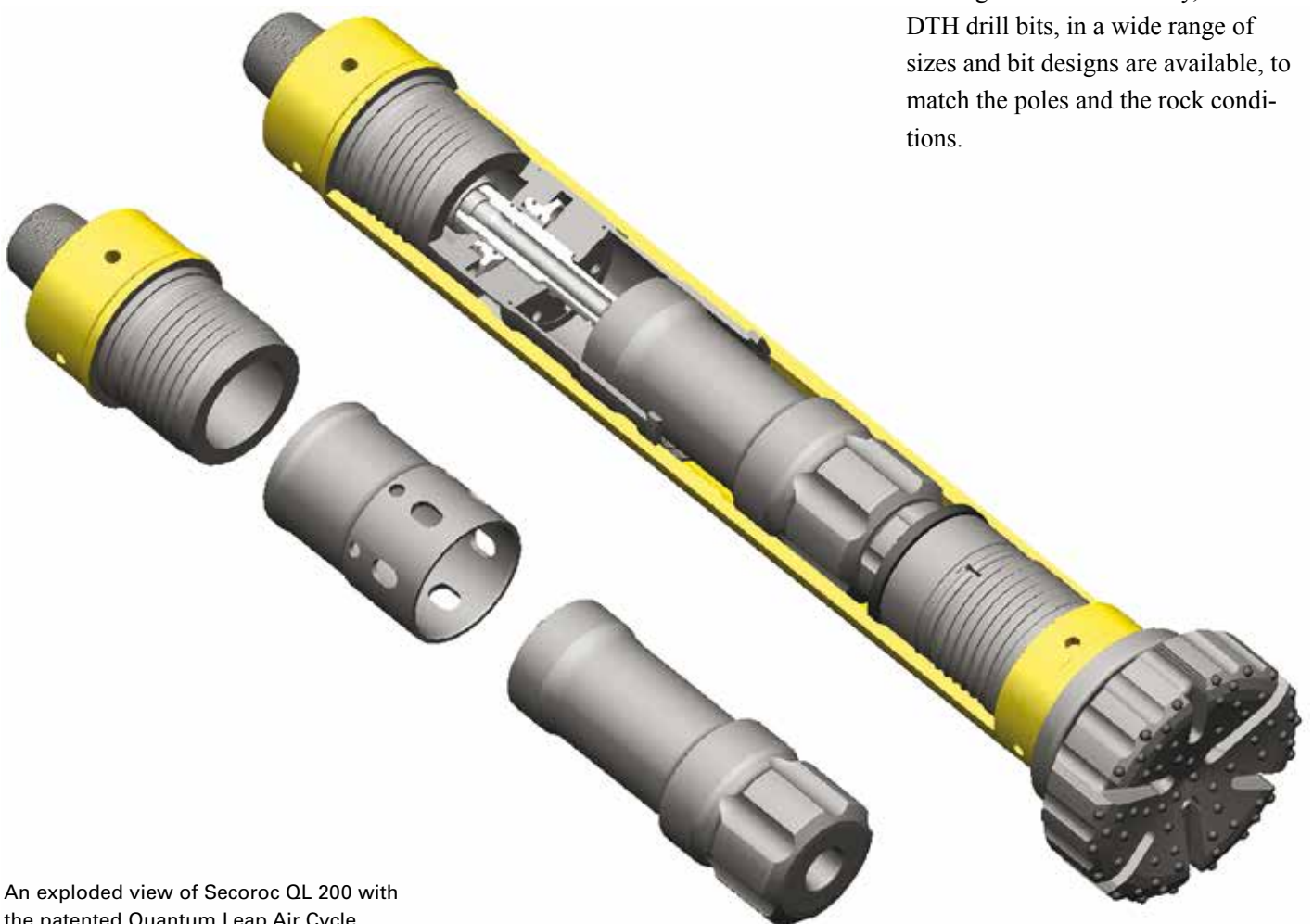
The QL 200 is ideal for holes from 17½" (444mm) to 26" (660mm) in size, while the QL 200S can drill holes up to 36" (914mm) in diameter. These flexible hammers can be used in piling, footings, piers, caissons and oil&gas operations.

Moreover, the QL 200 was successfully used to save the lives of many miners in Que Creek Mine Rescue, Pennsylvania, USA. By drilling a 26" and 29" hole, rescue cages could be lowered down to the trapped miners and they were all safely returned to the surface.



## Utility Power Pole drilling

Atlas Copco Secoroc has found an ideal niche for its large DTH hammers – drilling holes for the installation of utility power poles. Using the Secoroc PPD 120 pole drill models, this truck mounted drilling system can drill sockets from 12" to 24" in diameter in solid rock faster and more efficiently than both auger drilling or blasting methods. Naturally, Secoroc DTH drill bits, in a wide range of sizes and bit designs are available, to match the poles and the rock conditions.



An exploded view of Secoroc QL 200 with the patented Quantum Leap Air Cycle.



## Super large DTH solutions

There are many applications where super large DTH hammers are more productive to use than other drilling and excavating methods.

To meet these needs Atlas Copco Secoroc has the solution – the flexible Secoroc Cluster drill.





## Secoroc Cluster drills

A cluster drill consists of a large canister in which four or more 8" Secoroc DTH hammers are fitted. These hammers use Secoroc drill bits specially designed for cluster drilling.

Once installed the hammers are fixed in their positions in the canister and rotates with the canister. The bits too are fixed in their positions while drilling but free to rotate in the hammer when lifted off the bottom of the hole.

In this way the bits are turned to new positions and the wear on the buttons are evenly distributed. The number

and positions of the hammers depends on the drilling application.

As each DTH hammer requires around 19m<sup>3</sup>/min at 10bar air, a complete cluster drill needs many compressors. The drill bits are self-indexing and quick bit changes allow for rapid bit service.

Moreover, Calyx baskets are used to collect the cuttings, thus improving productivity by keeping the site clear from rubble.

Cluster drills are ideal for vertical holes such as bridge piers, footings, caissons & other foundation needs.

So far, Secoroc Cluster drills have drilled holes from 762mm up to 2235mm or 88" in diameter. Theoretically, though, the size of a cluster drill is only limited by the logistics of transporting it to a work site!

Cluster drills are even adaptable to reverse circulation or RC drilling as well as mud flush operations.



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