

Secoroc Rock Drilling Tools

***CORE DRILLING  
IN-THE-HOLE TOOLS***



## **INDUSTRY LEADER**

*In partnership with our valued customers and business partners, and with more than 140 years of experience, Atlas Copco continues to be an industry leader, in innovation and providing the best possible value in our products.*

*We are present in over 130 countries and have developed a proven distribution system that maximizes the efficiency in which our products are delivered, wherever your project is located. Our Customer Centers located throughout the world are factory supported and can provide the best possible solutions for your drilling needs.*

*We believe in continuous innovation and improvement. Our research and development teams visit drill operations worldwide to identify and develop superior performing products that maximize both product value and safety.*

*We offer a full line of diamond and in-the-hole tools, conventional and wireline drill rods and casing. The Excore line of products has proven to be a leader in the drilling industry and we are proud to highlight several products that are key components of the Excore solution.*

# **EXCORE LINE OF PRODUCTS**

## **MAXIMIZE PERFORMANCE, QUALITY, SAFETY AND RELIABILITY**

### **EXCORE EX II SAFETY OVERSHOT**

In today's drilling operations, safety is not an option; it is a critical component of every successful drilling project. We have developed our Excore EX II Safety overshoot with both safety and performance in mind. The safety mechanism of this overshoot, unlike competing products, does not require direct intervention from the drill crew to engage. This means that the crew cannot forget to engage the safety mechanisms as they are automatic and while pulling the tube, they do not have to stop the process to retrieve the core.

As a result, drillers are confident and have a peace of mind with one less process to worry about. This overshoot simplifies the process and maximizes the speed of each over cycle resulting in increased productivity levels.

### **EXCORE EX II HEAD ASSEMBLY**

The Excore EX II head assemblies have proven to be an industry leader. Available in DCMA size B, N, and H, for both surface and underground applications. The simple to use and easy to maintain heads provide drillers with the ability to maximize performance and safely "put rock in the box".

The secure latching and the mechanical piston that locks the core barrel head in the locking coupling is extremely strong and will secure the inner tube within the locking coupling, even in high back pressure holes. Along with primary landing indication, a secondary latching indication will let the driller know not only that its landed, but will indicate if the latches are not fully engaged; signalling that there is a problem in the core barrel and that further actions are required.



# WIRELINE DRILL RODS

## OPTIMUM BALANCE OF DESIGN, PRACTICAL FEATURES, LOWER OPERATION COSTS

When it comes to drill rods, it's very simple. They need to perform and anything less is unacceptable. Rod failure could mean loss of a hole and most likely the revenues that it would generate. There is no room for lower quality or substandard products. We have responded to the needs of the industry and we do not compromise on any of our products including our rods. We only use very high quality steel from a select few suppliers which ensures that our rods are consistently constructed with only the finest materials and match our exacting machining processes. Quality control is at the forefront and the results are the best rods each and every time. We worry about our rods so you do not have to. Our casing shares the same exacting quality as our rods. Simply put, we believe there isn't any better casing on the market. Whether it be tough overburden or in a multiple re-use situations, our casing is a constant performer.

### O SERIES DRILL ROD

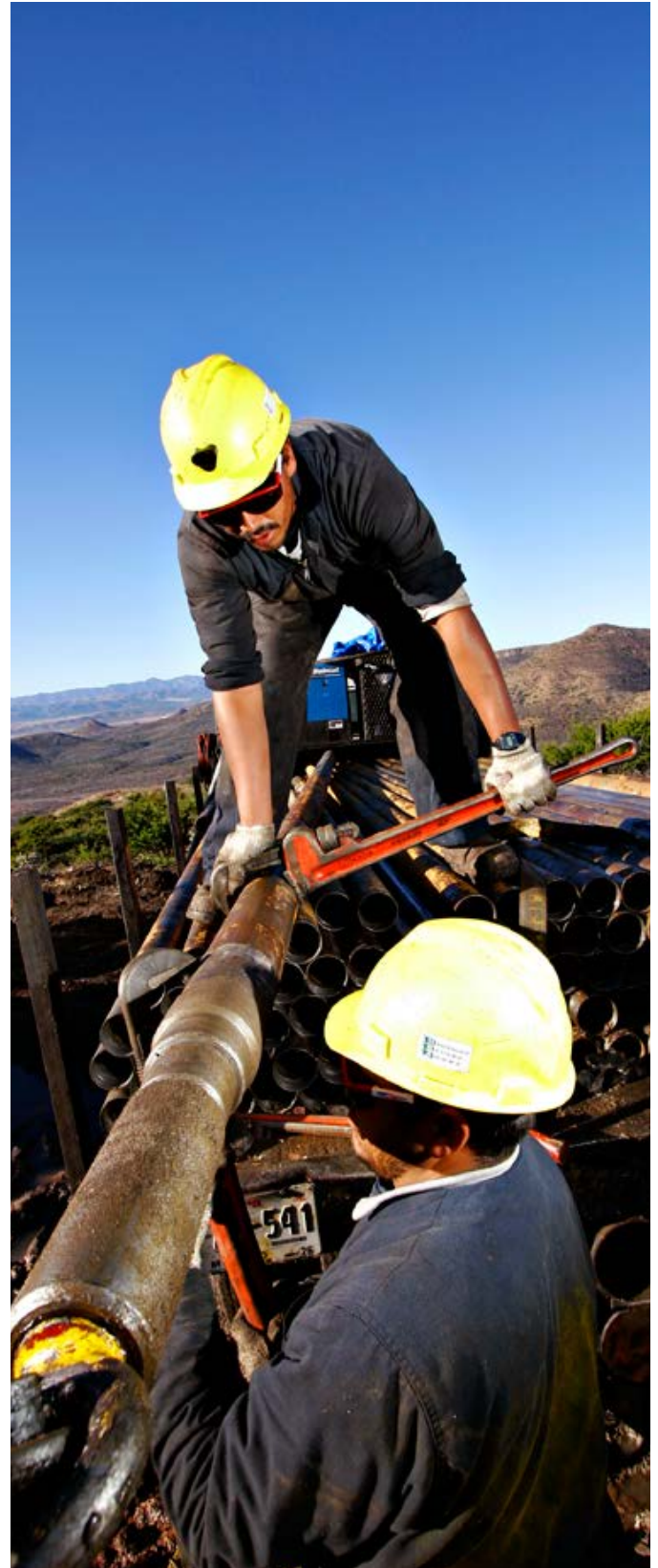
The well-known O thread drill rods have been widely used for shallow to medium depth holes for decades. We have made this rod to the same high standard since its inception and it continues to be a very popular choice in the industry.

### T SERIES DRILL ROD

The Atlas Copco T thread has been an industry leader for many years with countless drilled meters. Known throughout the industry for its strong pull back and performance in difficult drilling applications, it is suited when high pull back and torsion is needed in shallow or long, straight holes with no or little deviation.

### TT SERIES DRILL ROD

Complementing our T series, our TT (thin kerf) BTT rods offer the same strength and durability as their T series counterpart while increasing the diameter of the B core. They have proven themselves, year after year, as the leader in the thin kerf rods. Strength, reliability and longevity are its key features.



# Our deep hole wireline drill rods provide you with the optimum balance of design and practical features to keep your operating costs down.

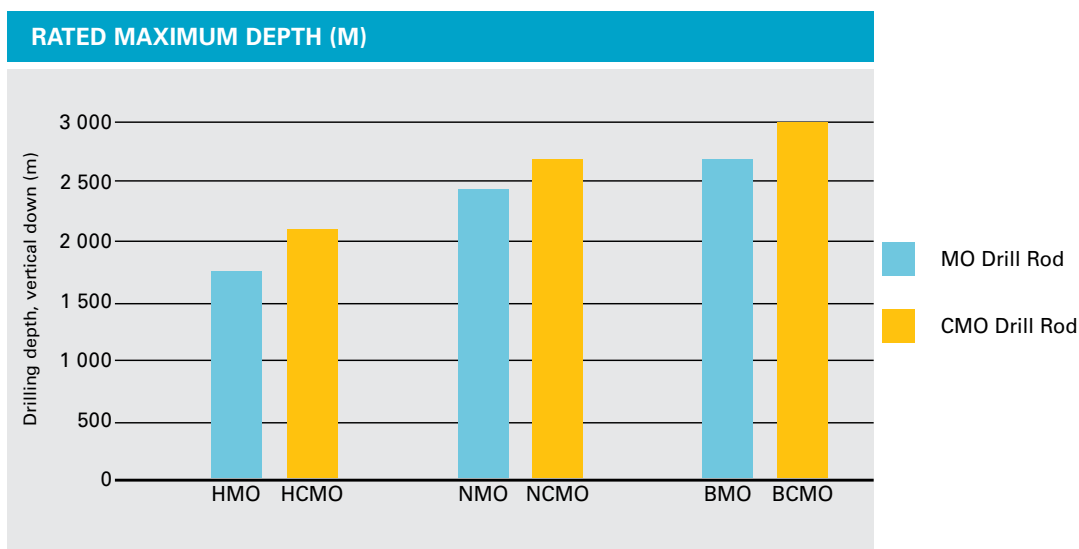
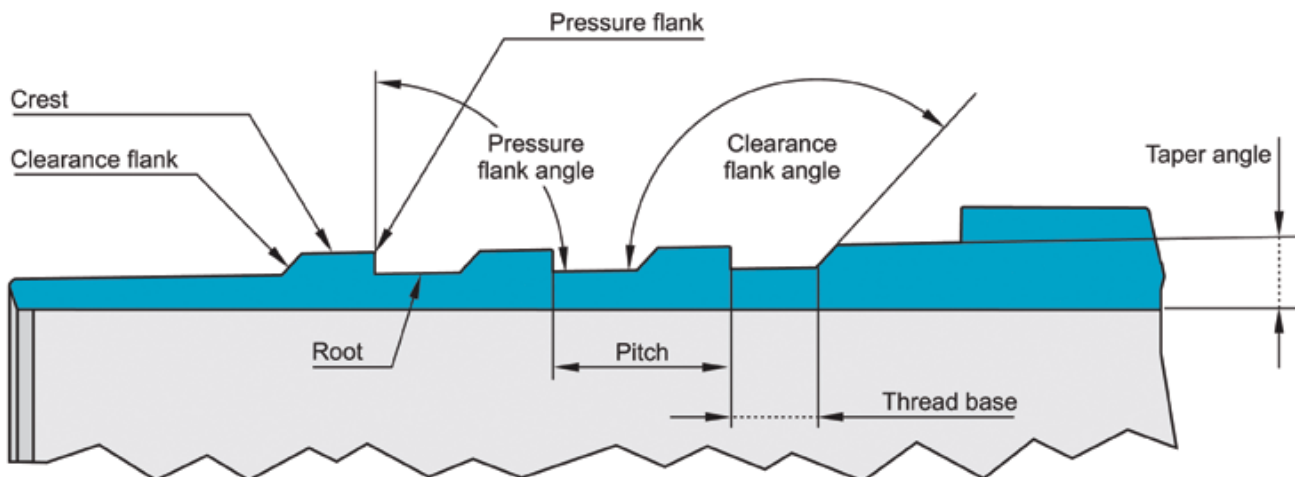
## MO SERIES DRILL ROD

The MO Series is a modified version of the popular O rod. The thread modification allows for additional depth and is perfectly suited for deviation drilling where added thread flexibility is required. These rods will work identical to the O rod in shallow holes but offer additional pull back and torsion capacity. Furthermore, the material requires a metallurgy which can deliver elevated mid body and tool joint mechanical property values made possible through heat treatment.

Using a state of the art through-wall induction heat treatment process in the manufacturing of seamless MO wire line drill rods, we ensure joint dimensional integrity by enhancing the ultimate mechanical properties of the tool joint area, before machining the MO thread.

## CMO DRILL ROD

The CMO Rod is an internally upset rod that offers the same thread characteristics as the MO series with reduced weight. Their light weight makes them an ideal choice for deep holes and fly in programs. In addition, they can reduce fuel consumption and the strain on the drill itself.



Recommended maximum depth (m) using an MO or CMO rod. A factor of safety applies to depth capacities. These are based on straight verticle and fluid filled holes.



# **GREAT 14**

## **GROUP OF MATRICES**

### **CORE DRILLING BITS**

With Excore, we have taken our proven Atlas Copco Hobic & Craelius designs and developed them further. We engineered new matrices and optimised crown profiles. By calculating the right balance between these variables we have achieved bits with exceptional penetration rates as well as extended service lives in the toughest of drilling conditions.

With the new Excore bit line, a contractor can drill both faster and deeper and spend less time changing drill bits. Strenuous field tests have shown the Excore line will outperform in the toughest of drilling conditions.

The metallurgy and design of the Excore bits also enables the bits to cover a wider range of applications compared to its predecessors.

A broader operating span for each diamond bit, results in increased drilling efficiency and simplified bit selection.

We selected 14 of our best matrices from Excore, the backbone of our diamond tool line, along with well proven and accepted Hobic and Craelius core drilling bits. These are our Great 14 Group of matrices.

Drillers can reduce the number of diamond drill bits usually required to tackle different rock conditions in their operation, without losing performance. On site this means that there is less need to pull rods to change bits for changes in rock formations.

### **HEAVY DUTY REAMING SHELLS**

To complement the bit selection, we have introduced a new range of Heavy Duty (HD) reaming shells with increased life. Offered in 2 versions: Standard for non-abrasive formations and Full Hole for abrasive formations.

# WIRELINER CORE DRILLING BITS

## SIMPLIFIED BIT SELECTION

The Excore series of new matrices combined with optimised crown profiles have been categorised into three types of drilling applications to simplify the bit selection for the driller. The Excore range is more forgiving, providing superior performance in a wider range of formations.

Rock Group	Formation Description	Rock Type	Abrasion Friendly	Matrix
1-4	Soft to medium hard Extremely to slightly abrasive Extremely to slightly broken	Shale Sandstone Limestone	2-4	
5	Medium hard Abrasive Moderately to slightly broken	Limestone Dolomite Weathered Granite Weathered Gneiss Serpentinite Metaperidotite	4-6 5-7	
6	Medium hard Moderately abrasive Moderately to slightly broken	Diorite Gabbro Peridotite Gneiss Basalt Andesite	7AC 6-8	
7	Medium hard - hard Moderately abrasive Slightly broken to competent	Metabasalt Amphibolite Metamorphosed Diorite Metamorphosed Gabbro Diabase	7ACF	
8	Hard Slightly abrasive Competent	Quartz rich Skarn Granite Pegmatite	11AC KS(B++) B-9	
9	Very hard Slightly abrasive or non-abrasive Very competent	Metamorphosed granitic rock Quartz rich Gneiss		
10	Extremely hard Non-abrasive Fine grained to amorphous Very competent	Chert Jasperite Quartzite Highly metamorphosed volcanics		8 10



# WIRELINE CORE DRILLING BITS

## AN EXCORE CORE DRILLING BIT FOR EVERY APPLICATION

Each Excore profile is available in various crown designs like the Extended Channel Flush (ECF), Jet profile and Face Discharge (FD). Combining these features with available crown heights, from 10-16 mm, means there is a bit for every core drilling application.

Basic profiles	Specialized profiles	Crown height
<b>Extended Channel Flush (ECF)</b> for broken to competent formations	<b>SAND Profile</b> For extremely broken and sand/clayish formations with double tube systems	<b>10mm</b> Short to medium depth holes
<b>Jet &amp; V profiles</b> for fast cutting in competent formations	<b>Channel Flush (CF) Channel Flush Fileable( CFF)</b> For conventional TT systems	<b>13mm</b> Short to medium depth holes
<b>Face Discharge (exFD)</b> for extremely broken & unconsolidated formations with triple tube systems	<b>Taper profile</b> For hole wedging operations (directional drilling)	<b>16mm</b> Deep Holes

### BASIC PROFILES



#### Extended Channel Flushing (ECF)

- Standard profile - general purpose design
- Suitable for mixed formations containing broken and competent zones
- Suitable for a broad range of formations



#### Face Discharge (exFD)

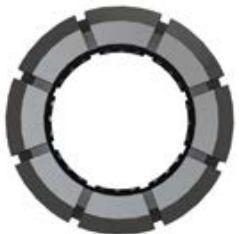
- New robust reaming shell designed to minimise clogging of flushing holes
- Suitable for broken/granular formations



#### V and Jet Profiles

- High performance "free cutting" bit
- High productivity
- Suitable for hard/competent formations
- Suitable for non-abrasive formations

### SPECIALIZED PROFILES



#### Taper

- Profile used in hole wedging (directional drilling) operations to ream wedged hole after pilot bit



#### Sand

- Suitable for competent to extremely broken or clay, clay/sand mixed formations
- Double tube applications
- To improve core recovery in soft/broken or loose zones



#### CFF/CF

- Standard profile for small/thin wall diameters in conventional systems TT/LTK
- Water way depth can be adjusted using metal file for better flushing control (CFF)
- Suitable for broad range of formations



# ***CORE DRILLING ACCESSORIES***

## **ACCESSORIES TO MAKE YOU SMILE**

We at Atlas Copco pride ourselves as being an industry leader in one stop diamond drilling supply. Quality and the best possible value are what we base our products on.

We are proud to provide a complete line of drilling tools and accessories. Tools to alleviate the stress of every day drilling, state of the art casing advancers, substitutes, recovery tools, water swivels, tube wrenches and casing cutter assemblies.



# PARTS AND SERVICE

## WORLDWIDE SERVICE NETWORK

**Assuring availability of parts, service and support you can trust. All of our cost efficient products to do the job for you. All of our parts are suited to work together, safe and reliable for surface and underground applications. With us, you get a unique in-house turn key solution for your project.**

### OUR PARTS

Atlas Copco Genuine Parts is an important element of a complete, well integrated total solution. When you invest in equipment from Atlas Copco, you always receive a quality product. Quality means reliability, availability and high productivity, all essential to your profitability.

To ensure your equipment remains fit, two things are needed: a good preventative maintenance schedule and a strict, genuine parts policy. Atlas Copco Genuine Parts helps preserve the superior quality of the products throughout their entire life-cycle program.

### OUR SERVICE

Atlas Copco offers several levels of service agreements to meet the requirements of your operation and to secure your productivity. Our service agreements help you build a quality operation focused on pro-active, planned maintenance to minimise unplanned downtime. We strive to maintain healthy, long-term working relationships built upon mutual commitment from all parties, good communication and shared knowledge.

The Atlas Copco service agreements are solidly founded on the philosophy of preventive maintenance and quality

repairs. We support maintenance with detailed parts information on every piece within our full inventory of components, accessories, and tools.

### OUR SUPPORT

At Atlas Copco we know that the moments of truth are at delivery, start up and operation. Here the difference between those who keep their promises and those who do not come to daylight. Our dedication to offering the best possible support comes from recognising its impact on every project's success or failure.





## **PERFECT COMPLEMENT FOR YOUR CONSUMABLES**

*Demanding core drilling applications requires a trusted combination of end user expertise with capital equipment, consumables as well as spare parts and service.*

*Atlas Copco is a world class provider of industrial solutions and your logical choice for world class service and a complete range of industry leading deep hole core drilling rigs, diamond tools and tubular products.*

**[www.atlascopcoexploration.com](http://www.atlascopcoexploration.com)**

# *Sustainable Productivity*

We stand by our responsibilities towards our customers,  
towards the environment and the people around us.  
We make performance stand a test of time.  
This is what we call - Sustainable Productivity.

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The Atlas Copco logo consists of the company name in a white, italicized serif font, centered between two horizontal white bars of equal length.

*Atlas Copco*