



WIRELINER CORING RODS



NEXT GENERATION DRILL ROD FOR MODERN CHALLENGES

Today's drilling environment involves challenges previous generations rarely faced, if ever. From deeper, harder-to-access deposits to operational challenges with automated rod handlers to tighter margins from a more competitive and volatile global mineral exploration market, today's driller needs efficient solutions to difficult situations.

Drilling has changed – have your drill rods changed to meet these challenges?

Introducing the next generation wireline drill rods: **S-Maxx® by Di-Corp**. Specifically designed to meet the needs of today's modern driller, S-Maxx drill rods' unique dual start thread and design features will help drillers reach greater depths and achieve new limits.

Di-Corp spent years designing, researching, developing, improving, and testing the S-Maxx to ensure it was ready to both meet the needs of modern

drilling and match our high standards for drill rod quality and durability. In doing so, we paired our demonstrated commitment to quality rods found in all Drillers Edge wireline rods with a revolutionary new thread form uniquely capable of delivering unmatched drilling performance.

Benefits of using S-Maxx:

- Superior joint strength resulting in the highest torsional and tensile strength on the market.
- Reach greater depths – depth capacity of 4300 m.
- Prevent cross threading with dual start threading.
- Ideal for automated rod handling.
- Up to two times normal drill string life.
- Indicator grooves provide quick visual reference on overall wear on rods.

**Max rod life. Max joint strength.
Max depth capacity. Max efficiency.**



WHY S-MAXX?

The S-Maxx name comes from two parts: our patented S shaped interlocked profile thread and the maximum performance delivered by the rod. The dual start S thread delivers more surface area and contact than previous thread forms, resulting in faster make and breaks and the highest torsional and tensile strength in the market.

The S shaped curvature of the load flank creates a self-locking thread profile resistant to bulging while the large corner radii improve fatigue cycling by eliminating areas of high stress concentration, improving the cycle life of the joint.

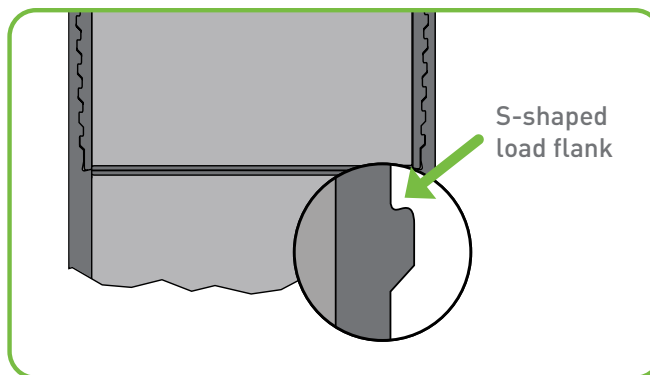


Figure 1 - Diagram of the S-shaped load flank of the S-Maxx thread profile.

The dual start thread allows for a finer thread pitch allowing for more threads to be engaged without sacrificing make up speed. This provides a more even load distribution along the length of the thread, improving performance when compared to traditional designs. (See comparison in Figures 2 and 3 below).



Figure 2 - A typical representation of how preload stress sits in a single start thread using heat mapping. Stresses within the connection typically concentrate near the final full wrap of the pin thread (shown on the right side of the model).

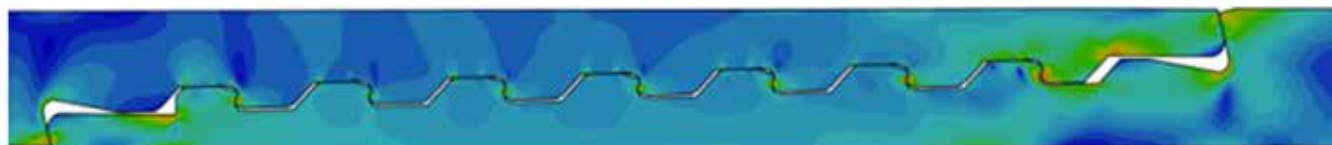


Figure 3 - How S-Maxx distributes the preload further down the entire length of the thread, much more readily than a single start thread.

An additional patented design feature prevents cross threading to ensure quick and easy make up and allows drillers to remain out of harm's way.

The new S-Maxx thread and unique design features are machined onto Drillers Edge tubing, undergoing the same manufacturing processes that have given our rods a global reputation for durability. Drillers Edge rods have routinely proven to last two times longer than industry standard.

TAKE YOUR DRILLING TO THE MAXX

When margins are tight, efficiency is key. With S-Maxx, you gain efficiency by preventing cross threading – resulting in faster make and breaks. You gain efficiency from more durable rods, resulting in cleaner shifts, reduced downtime, and increased productivity. By investing slightly more on drilling rods, you gain lower cost per meter drilled throughout the project.

In addition to the benefits realized in standard drilling situations, the S-Maxx is also ideal for more specific and challenging situations, such as:

AUTOMATED ROD HANDLING

Automated rod handling has become the standard for drilling. S-Maxx is ideal for automated rod handling as its dual start thread and design features prevent cross threading and improve safety as a result. This means your automated rod handler can make the connection right the first time, every time.

DIRECTIONAL DRILLING

The unique profile of the S-Maxx thread reduces stress risers in the connection, reducing joint fatiguing during deviated drilling. Because there are no sharp corners on the thread, there are fewer pressure points for microcracks to develop. Instead,

the pressure is spread throughout all threads of the joint. With each part of the thread sharing the load, the S-Maxx can withstand greater pressure when deviating than can other thread forms.

DEEP HOLE DRILLING/DEMANDING CONDITIONS

With the highest torsional and tensile strength on the market, the S-Maxx will last under grueling conditions and achieve drilling depths not previously possible. That makes it strong and durable enough to reach any depth you require.

When it comes to deep hole drilling, efficiency is king. The greater the depth, the more time becomes a factor when changing out the rod string or dealing with rod failures. Seconds become minutes and minutes become hours the longer the drill string becomes.

S-Maxx's dual start thread prevents cross-threading, allowing for faster make and breaks. This helps you assemble, break, and reassemble the rod string faster each time, with a more durable rod that is less likely to need replacing. Spend less time tripping in and out and more time hitting your target.



KNOW YOUR WEAR

The S-Maxx is engineered to allow drillers to reach the max depth with max durability. However, as the outer diameter (OD) of the rod wears down, depth capacity should be derated to compensate for the thinning of the box wall thickness.

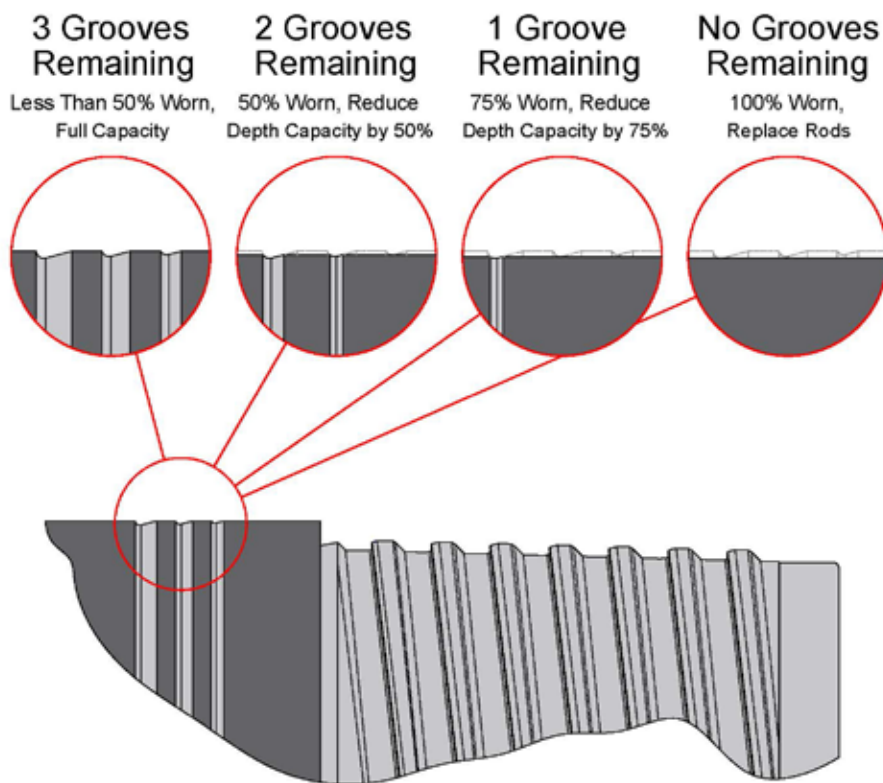
S-Maxx makes it easy to know how much wear a rod has experienced and thus how much to reduce depth capacity with our unique identification grooves.

The identification grooves are designed with three grooves of different known diameters. This is to provide the drillers with a quick and easy reference to the percentage of OD wear currently present on the

body of the rod without the use of any specialty tools or devices.

As the grooves begin to wear off from the body of the rods, the depth capacity should be derated by the same percentage indicated in the diagram below. This will help ensure that rod wear is properly monitored and that worn rods are retired to shallower/easier holes or scrapped out accordingly.

Once the identification grooves are completely worn off, the rods can be scrapped out with the confidence that they were not disposed of prematurely and that you are getting max value from them.



END-TO END DRILLING SOLUTIONS

We offer a complete line of adapter subs and locking couplings precision-machined to fit S-Maxx drill rods.

WARNING: Mixing Di-Corp rods with other manufacturers' rods, adaptors, or threaded accessories is not recommended. Failure to adhere to this recommendation may cause premature failure, and an investigation may result in the warranty becoming void.

As a leading supplier of innovative drilling solutions, Di-Corp has the products and supplies you need to ensure maximum productivity for your drilling operations. We've been sourcing the best and building it better since 1960 and have the knowledge and expertise to stand behind what we sell.

Di-Corp is your one-stop source for all of the following drilling consumables, backed by decades of drilling experience, fluids engineering, and customer-focused 24/7 service:

- Drillers Edge™ Wireline Coring Rods, Casing, and Adapter Subs
- CoreMatrix™ Bits, Edge Reaming Shells™, and Diamond Tools
- Core Retrieval Tools and Accessories
- EarthPro™ Drilling Fluids, Greases, and Additives
- Tooling, Consumables, and Accessories



S-MAXX[®] WIRELINE DRILL ROD SPECIFICATION

STANDARD S-MAXX DRILL ROD - PARALLEL WALL

Specification (nominal)	Unit	BS	NS	HS
Outer diameter OD	mm (in)	55.58 (2.19)	69.90 (2.75)	88.90 (3.50)
Inner diameter ID	mm (in)	46.1 (1.82)	60.33 (2.38)	77.79 (3.06)
Wall thickness	mm (in)	4.87 (0.19)	4.87 (0.19)	5.59 (0.22)
Pin end length	mm (in)	44.5 (1.75)	44.5 (1.75)	44.5 (1.75)
Thread pitch	mm (in)	10.16 (2.5)	10.16 (2.5)	10.16 (2.5)
Weight	kg/m (lb/ft)	5.97 (4.01)	7.64 (5.14)	11.42 (7.67)
Rod content volume	L/m (g/ft)	1.66 (0.13)	2.86 (0.23)	4.75 (0.38)
Hole volume	L/m (g/ft)	2.83 (0.23)	4.51 (0.36)	7.20 (0.58)
Rod/hole annulus volume	L/m (g/ft)	0.41 (0.03)	0.68 (0.05)	1.06 (0.09)
Recommended max depth	m (ft)	4000 (13,000)	3600 (11,800)	3150 (10,300)
Rated max pullback	kN (lbf)	427 (96,000)	449 (101,000)	534 (120,000)
Rated max drilling torque	Nm (lbf ft)	3661 (2700)	3661 (2700)	4067 (3000)
Min make-up torque to 1000m	Nm (lbf ft)	678 (500)	750.69 (550)	1017 (750)
Displacement volume	L/m (g/ft)	0.76 (0.06)	0.97 (0.08)	1.45 (0.12)

STANDARD S-MAXX DRILL ROD - LITE

Specification (nominal)	Unit	NS	HS
Outer diameter OD	mm (in)	69.90 (2.75)	88.90 (3.50)
Inner diameter ID - box shoulder	mm (in)	60.33 (2.38)	77.79 (3.06)
Inner diameter ID - midbody	mm (in)	61.82 (2.43)	80.85 (3.18)
Wall thickness - box shoulder	mm (in)	4.76 (0.19)	5.59 (0.22)
Wall thickness - midbody	mm (in)	4.03 (0.16)	4.03 (0.16)
Pin end length	mm (in)	44.5 (1.75)	44.5 (1.75)
Thread pitch	mm (in)	10.16 (2.5)	10.16 (2.5)
Weight*	kg/m (lb/ft)	6.73 (4.53)	9.08 (6.11)
Rod content volume*	L/m (g/ft)	3.03 (0.24)	5.09 (0.41)
Hole volume	L/m (g/ft)	4.51 (0.36)	7.2 (0.58)
Rod/hole annulus volume	L/m (g/ft)	0.68 (0.05)	1.06 (0.09)
Recommended max depth**	m (ft)	4300 (14,000)	4100 13,400
Rated max pullback	kN (lbf)	449 (101,000)	534 (120,000)
Rated max drilling torque	Nm (lbf ft)	3661 (2700)	4067 (3000)
Min make-up torque to 1000m	Nm (lbf ft)	750.69 (550)	1017 (750)
Displacement volume	L/m (g/ft)	0.88 (0.07)	1.45 (0.12)

* Calculation based on a 10 ft drill rod

** Recommended maximum depth capacity with lower powered drill

These ratings are based on calculated and/or tested values and similar results can be expected. The care and handling, as well as drilling conditions, practices, and equipment will also play a significant role in the ultimate depth capacity and performance. For extreme conditions such as drilling near the limits of depth capacity or holes with frequent wedges/directional changes, pay close attention to rod wear, and replace worn rods with greater frequency (at a reduced wear rate). Ensure make-up torque is increased to match operating torque as depth increases. If additional information is required, please contact your sales representative.

The use of anti-galling thread compound is mandatory for the initial make-up of the joint.



DI-CORP

DOWN TO EARTH BUSINESS

1.800.661.2792 | www.di-corp.com | info@di-corp.com
Di-Corp is a registered trade name of Diversity Technologies Corp.