



Advanced Cable Solutions for Electrification & Sustainability

October 2021

Prysmian
Group

Linking
the Future



- **Prysmian is**

the world's biggest cable solution provider with 112 plants in 50 countries, about 29,000 employees worldwide and the strong power of 25 R&D centers.

- **Our Offer:**

Providing customers and communities worldwide with cable solutions based on state-of-the-art technology, consistent excellence in execution and in-depth understanding of the needs of an evolving market.

At our centers and plants in Germany we specialize in different segments within the cable industry. Germany is home of Prysmian's Competence Center for Crane cables.

- **Our mindset**

Customer satisfaction is our number one priority and fundamental to our future growth. Hence, the very core of our business is to provide our customers with technologically innovative, safe and sustainable solutions.



PROTOLON Family – The Real Deal



PROTOLON(SMK-200)	PROTOLON(SMK)	PROTOLON(SMK+HS)	PROTOLON(iQ)
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Made for reeling operations with **moderate** mechanical stresses

Made for reeling operations with **high to highest** mechanical stresses

Made for **High speed** reeling operations

Made for **Permanent Monitoring** of reeling operations





Main features



- ✓ Optimized design for gantry speed up to 200m/min
- ✓ Flexible and easy to work with
- ✓ Robust and reliable to work under harsh conditions
- ✓ With or without fiber optics
- ✓ High-grade compounding for small OD & less weight
- ✓ Permissible tensile load 25N/mm² (dynamic)

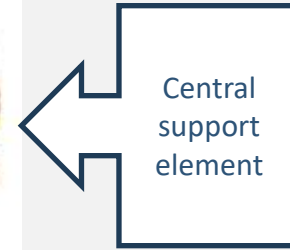


Main features

- ✓ Optimized design for gantry speed up to 240m/min
- ✓ High flexible and easy to handle
- ✓ Made for high and very high mechanical stresses
- ✓ With or without fiber optics and/or pilots, TSP, control cores
- ✓ High-grade compounding for small OD & less weight
- ✓ Permissible tensile load 30N/mm^2 (dynamic)



PROTOLON(SMK+HS) - High Speed operations managed with highest reliability



Main features



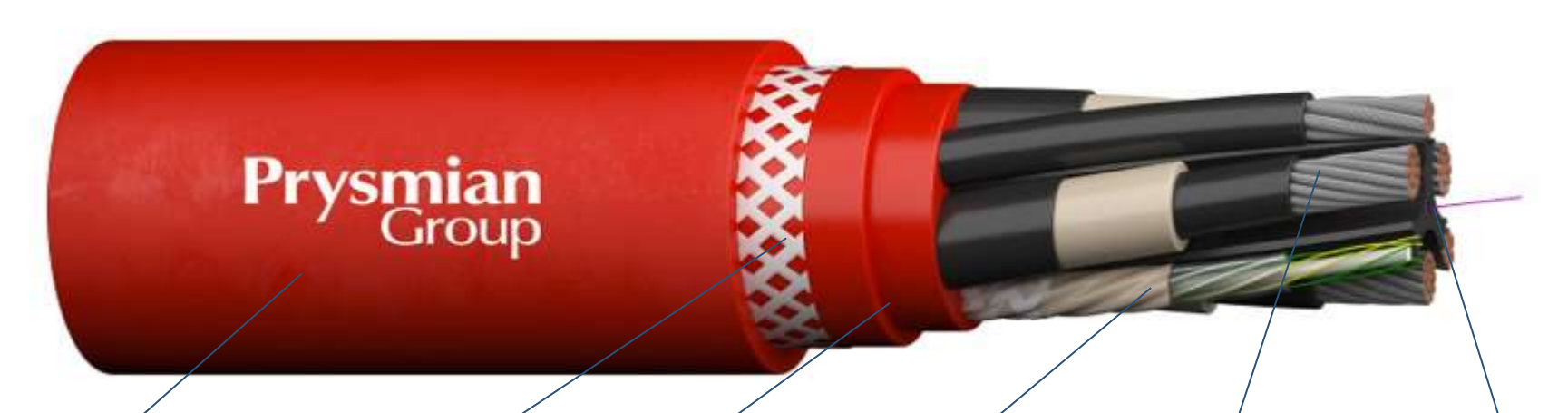
- ✓ **VERY HIGH TENSILE FORCE** due to integrated central carrier element
- ✓ **Highest travel speed**
- ✓ outstanding mechanical protection due to further optimization of insulation giving more room to the extreme robust sheath system like a buffer keeping mechanical stresses away from core assembly
- ✓ Diameter conform to all other PROTOLON types
- ✓ **stronger anti-torsion** braid for better resistance to torsion
- ✓ **extra elements:** FO's, pilots, BUS

PROTOLON(iQ) – Measure – Control – Predict



MV reeling cable with well-known PROTOLON(SMK) design!

Enhanced with IQ function



High grade outer Sheath – type PCP (better than 5GM5)

Anti-torsion braid

High grade inner Sandwich – type PCP (better than 5GM5)

FO element with commodity and IQ-ref. fibers

Power cores, super flexible tinned CU, with high grade EPR insulation

Cradle separator with IQ-Sensor fiber

PROTOLON Arctic – global warming is opening Northern Sea Route



Our Arctic Crane cables never get cold feet.

With a specially developed inner and outer sheath material, our Arctic Crane cables are fit to operate in a fully flexible operation mode down to -50°C . And even more important: without any limitation in the travelling speed, bending radii or tensile force required by the new generation of ASC, RMG and E-RTG cranes. Rest assured, our cables will stand steadfast as the arctic winds cover everything in ice.



MAIN FEATURES

- ✓ Cold resistant to -50°C
- ✓ Superior impact and abrasion resistance
- ✓ Excellent flexibility, also at very low temperature
- ✓ Resistant to oil, ozone, UV, moisture and water
- ✓ First-rate mechanical and electrical characteristics



Environmentally friendly feeding of docking vessels

Our PROTOCOLON Shore Connection cables will keep the ships sustainably energised.

As you sit at the dock of the bay, watching the tide roll away, our PROTOCOLON SC cable will work hard to keep the vessels energised from the electrical grid while berthing. Instead of keeping the diesel engines running, the vessels get more sustainable energy while saving on fuel and reducing the carbon footprints. A win-win for everyone. Just lay back and breathe easily.



**Plug & Play
Solutions**





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Thank you

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