



# Protecting seismic survey cables

## Vor Towing

Seismic towed arrays undergo significant loading during operation. The towing forces from the vessel combine with drag from the sea and lateral loads from diverter and cross chains. These complex loads need to be correctly controlled to ensure that the seismic array operates correctly.

Using our expertise in understanding the difficulties associated with working in demanding conditions, our towing attachments and ancillaries help protect the seismic survey cables from over bending and to increase the local stiffness of cables at the attachment point.

### Vor HR (Helical Rod)

The Vor HR (Helical Rod) System is a robust set of helically twisted wires, supplied with end caps so that no sharp edges are present on the outer surface of the cable.

- Localized abrasion resistance to cable
- Increased grip capacity by spreading the load over a greater area of cable
- Superior grip capacity at connection point when used in conjunction with Vor UTPP (Umbilical Tow Point Protector)

### Vor MBW (Multiple Ballast Weight Assembly)

The Vor MBW (Multiple Ballast Weight Assembly) provides a secure and easy to handle ballast for attachment to Lead-in cables. Typical ballast weights are 75kg, 100 kg and 150 kg, although ballast weights can be tailored to your needs.

- Secure attachment to lead-in cable
- Integral bend stiffeners ensure load is spread over the length of the unit
- Lead-free ballast solution Information needed to specify Vor MBW
- Cable diameter and tolerances
- Cable outer jacket material



## Vor LB (Lead-in Bend Assembly)

The Vor LB (Lead-in Bend Assembly) is used as an attachment point on seismic survey cables for towing applications. The assembly protects the cable from over bending by increasing the local stiffness of the cable at the attachment point. A Vor LB allows for assembly over a pre-terminated cable and is generally used on seismic survey lead-in cables to attachment towing chains, paravane type diverters or flotation.

- Oversized bore bend stiffener with color coded packers to suite numerous cable sizes
- Allows for assembly over pre-terminated cable
- High grip capacity on the lead-in cable
- Ideal attachments for diverter and tether head



Vor LB



Vor UTPP

## Vor UTPP (Umbilical Tow Point Protector)

The Vor UTPP (Umbilical Tow Point Protector) is specifically designed to aid attachment of a tow point to the gun umbilical.

- Helical rods to ensure integrity of the gun umbilical
- Helical rods and olive arrangement ensure that the tow point has significant grip capacity

## Vor CM (Connector Mounted Assemblies)

The Vor CM (Connector Mounted Assemblies) is designed for mounting onto the Lead-in or Streamer Connector and meets the different protection requirements.

- Principle application as per lead-in assembly
- Internal clamp profile to suite termination
- Full cable strength attachment point



Vor CM

## Contact Us

Trelleborg Offshore delivers innovative and reliable offshore solutions that maximize business performance to meet your needs. Our dedicated and highly skilled staff are always on hand to provide seamless process support from initial idea, through to delivery and beyond.



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