



## Cable protection system

### NjordShield

NjordShield is an innovative and cost-effective cable protection system (CPS) that is suitable for both J-tube and monopile wind farm installations. With over 30 years' experience in providing cable bending solutions to the offshore industry, we have utilised our expertise to develop this technology.

Like its counterpart NjordGuard, the NjordShield CPS incorporates advanced material technology and optimised geometry to ensure it provides long-term cable stability and performance at the freespan between structure and seabed.

Using proven clamping technology borrowed from our buoyancy products, NjordShield is secured in a typical funnel type bellmouth and utilises the existing hang off clamp inside the structures for cable and CPS security.

NjordShield features our advanced API 17L certified Uraduct® abrasion-resistant polyurethane, and can be extended to provide seabed protection across the scour extremities to the point of burial. NjordShield has the option to be supplied either with or without a flexible internal bend stiffener.

A unique benefit of NjordShield is its small individual component size, this is particularly beneficial when deck space is limited for both storage and deployment. The small individual component size makes for easy manoeuvring and minimises storage space required on the back deck. NjordShield grips the cable rather than having a clearance, so it can be deployed from a simple flat deck barge being installed one piece at a time. NjordShield requires no complicated overboarding equipment other than the cable feeding device.

Typically for installation into trumpeted J-tubes, NjordShield is a cost-effective solution without a connector or the requirement to latch into position. Furthermore, it does not require the use of any pull-in heads or weak links for installation meaning no sacrificial parts or component resets are needed.

Full ultimate limit state (ULS) and fatigue limit state (FLS) studies are available to suit each unique application of NjordShield, either as part of a supply contract or as an up-front Early-Engineering-Appraisal.

## Benefits

- Monopile and J-tube capable
- Small size ideal for smaller installation vessel
- Easy handling and manoeuvring
- Less storage space required
- API 17L approved materials
- Can be deployed from a flat deck barge

## Applications

- Wind turbine generators
- Offshore substation platform

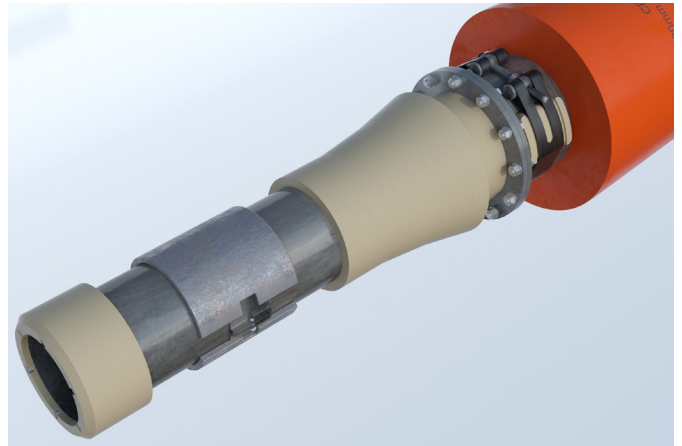
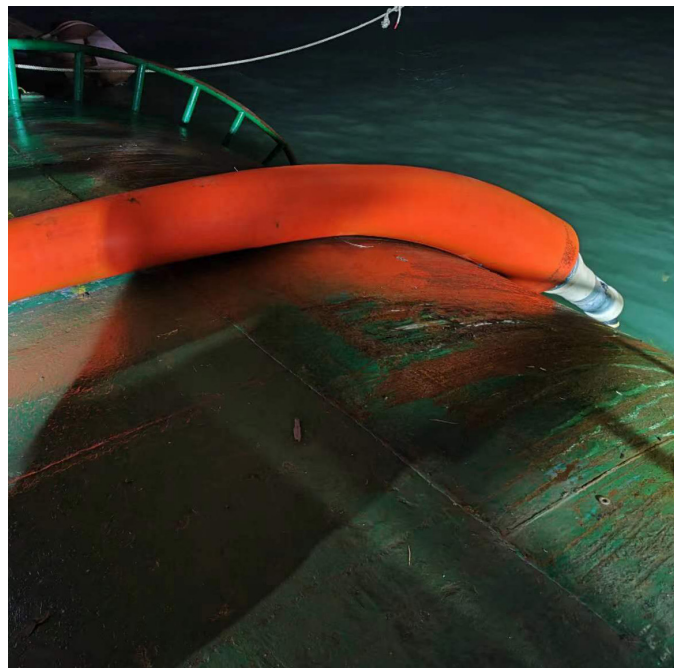


Image shown with the rigid interface option  
(also available with a flexible internal bend stiffener)



CRP Subsea delivers innovative and reliable offshore solutions that maximise 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.