# Lankhorst | Mouldings

#### OFFSHORE

# **UraGUARD** Cable and Flowline Protection



### **UraGUARD**

In harsh offshore environments subsea umbilicals, flexible flowlines, risers or fibre optic cables are often subjected to large impacts or high levels of abrasion due to rocky seabeds, pipeline/cable crossings etc.

Lankhorst's UraGUARD system consists of cylindrical half shells moulded from high impact resistant polyurethane (PU) or polyethylene (PE) material, and is available in a wide range of inside diameters, lengths and wall thicknesses. UraGUARD can be useful in many applications as an alternative to concrete mattressing or rock dumping, including among others:

- Crossing Protection
- Impact Protection
- Abrasion Protection
- Pipeline Spacers
- Pipeline/Cable Ballasting

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### **Design features**

The UraGUARD system is designed to be safe to handle and fast to install.

The design features overlapping and interlocking half shells to provide a close fitting protection around the pipeline, whilst also ensuring alignment during installation. The shells can be manufactured from marine grade PU and PE materials in lengths of up to 2 metres.

The UraGUARD system is secured using either corrosion resistant Alloy 625 or glass filled nylon strapping, placed in recesses on the product during installation. These recesses ensure an even spacing of the strapping along the pipeline without measuring along with a smooth consistent outer diameter.

The flexible characteristics of the materials enable the product to meet the required minimum bend radius of the pipeline.







#### **UraGUARD** Cable and Flowline Protection

#### References

Lankhorst's UraGUARD Cable and Flowline Protection system has been supplied and installed in many projects all over the world. Examples of some recent projects are:

- Technip France Total GirRI 2 Umbilical Crossing Protection
- Petronas RDBD-A Gaslift Flexibles Protection
- Subsea 7 Petrobras Guara Lula Flexjoint Protection

And many others. A full reference list is available upon request.



#### Lankhorst Mouldings Offshore

Lankhorst Mouldings Offshore have a proven track record in providing the offshore industry with innovative polymer based technical solutions that stand the test of time. Lankhorst Mouldings has for over 30 years been producing products using our unique thickwalled plastic moulding technology. We can supply high-performance innovatively engineered products to meet the demands of the offshore industry. Lankhorst Mouldings products utilize field proven technology and experience to provide superior technical solutions. The company's technical solutions are designed not only to meet the customers' requirements, but are also foreseen to be used again and again.



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# Why choose UraGUARD?

- Safe to handle and fast to install half-shell protection system
- Manufactured from marine grade PU and PE materials
- Overlapping and interlocking half shells to ensure alignment during installation
- High impact resistance
- Manufactured in lengths up to 2 meters
- Minimum Bend Radius achieved through flexible characteristics
- Large range of internal diameters available
- Extensive range of bending and impact tests can be performed in-house
- Half-Shells secured using corrosion resistant or non-metallic banding

# Materials and testing

To meet the requirements of different offshore applications and environments, the UraGUARD cable and flowline protection product range is available in a range of standard grades of Polyurethane and Polyethylene.

All high performance PU and PE compounds used in production have been subjected to extensive testing and trials to ensure optimum performance in the demanding marine environment. Specific material formulations with custom properties can also be made available.

A range of testing can also be carried out at Lankhorst's in house testing facilities on both the material and also the end product. Demonstration of the bending radius and impact resistance of the product can be executed as required.

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