## Lankhorst | Mouldings

#### **OFFSHORE**

### **Drilling Riser Protection and Storage**



Protection and storage of bare drilling risers strings both on and offshore can often be an issue, Lankhorst Mouldings provides solutions for both.

#### **Riser Fins**

Lankhorst Mouldings has developed a patented riser fin protection system that is designed to protect the bare riser joint and its corresponding auxiliary lines from any form of impact, and guide the riser through the riser tower. One set consists of five to eight riser fins that are made from a high impact resistant neutral buoyant thermoplastic material. The fins duplicate the O.D. of buoyant joints, when present, to allow easier handling on the riser handling equipment. The addition of the Riser Fin Protection System creates value to the operation by protecting the riser and rig from costly damage. It will increase the speed and safety of the riser handling operation. The addition may also increase the working window for running riser during marginal weather conditions. Any increase in drag due to the application of riser fins is minimized by an open structure design.

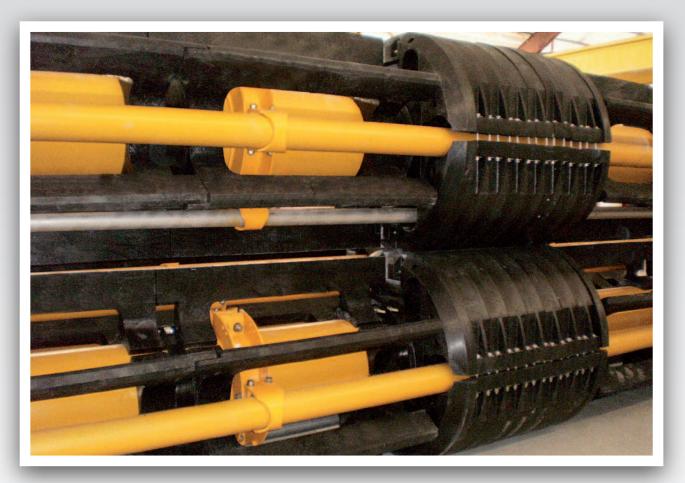
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### **Support Shims**

Lankhorst Mouldings have also developed a support ring system that will enable drilling risers to be stacked horizontally up to 14 levels high. The support rings can be supplied individually or in fully assembled half-shims. Installation of the two half rings around the drilling riser and auxiliary lines in specific locations enables the risers to be stacked. The rings are made from a high compression resistant plastic material, and duplicate the O.D. of the installed Riser Fins and any buoyant joints.



#### **Guiding Cones**

Guiding cones can be used to assist in the positioning and placement of the riser joints when stored vertically in the riser bay. The guiding cones designed by Lankhorst are produced from a high impact resistant thermoplastic to ensure a long life time.



#### **Drilling Riser Protection and Storage**

#### References

Lankhorst Mouldings have an extensive record on providing drilling riser protection and storage all over the world. We regularly provide these products to:

- Aker Solutions
- Ensco
- Pacific Drilling
- NOV
- Stena Drilling



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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#### Key design features

Riser Fins and Support Shims can be supplied for varying Riser and Buoyancy ODs, and with varying end shapes. The standard length of a riser fin is 5ft, with a complete system consisting of multiple sets for full coverage of the joint.

The riser fins are tensioned to the riser with Kevlar strapping and stainless steel tensioners. Support shims half rings are fastened together with stainless steel.

The fins and shims are packed on standard wooden pallets and are easily stackable inside 20ft or 40ft ISO containers, ensuring optimum use of space and minimizing handling and transport costs. The individual items weigh 30kg or less, making them relatively easy to handle during installation, and requiring no special equipment to install.

The material used for production is selected based upon its compression and impact resistance in the diverse weathers conditions the Arctic and the Gulf of Mexico, and anything in between.







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