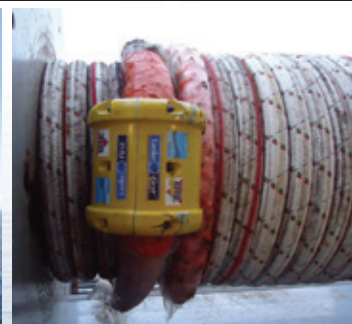
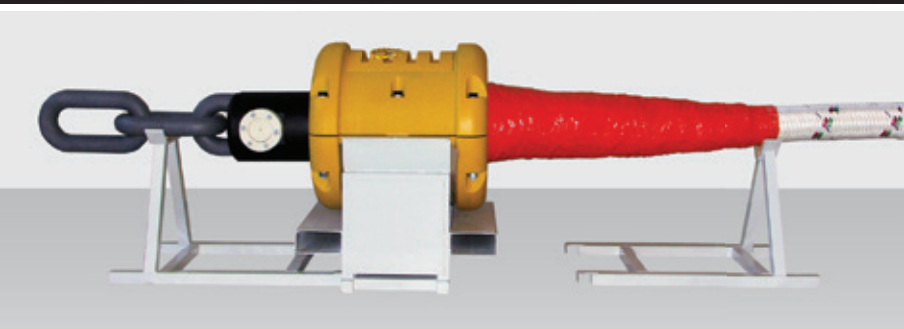


Lankhorst | *Ropes*



Lanko  **First**

Fibre Connectors

OFFSHORE DIVISION



LankoFirst Deepwater Rope Connector

LankoFirst is a new type of fibre rope connector for deepwater moorings from Lankhorst Ropes Offshore Division, part of the Royal Lankhorst Euronete Group BV. The LankoFirst connector gives naval architects and installation contractors a fibre rope connector that is smaller, lighter, easier and quicker to make-up than traditional rope connectors.

The LankoFirst fibre rope connectors are available for fibre rope to fibre rope (R2R), fibre rope to wire rope (R2W), and fibre rope to chain (R2C) connections.

LankoFirst Fibre Connectors are:

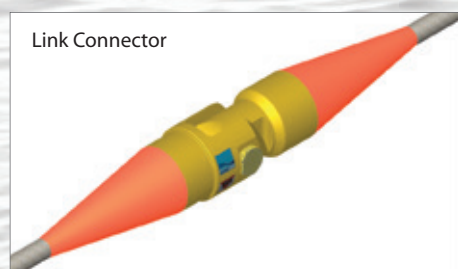
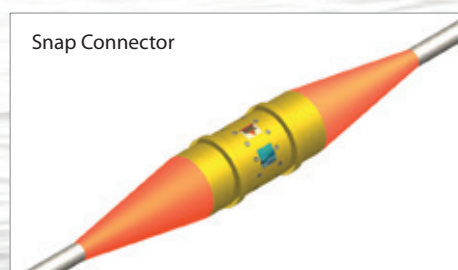
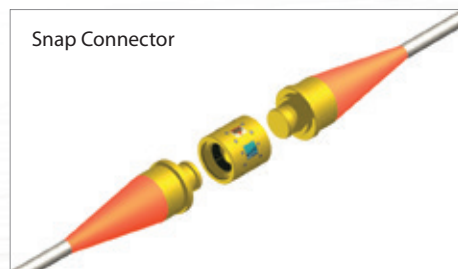
- Smaller, lighter, stronger and more efficient than current plate links and thimbles.
- Easier to make-up and the rope is slimmer and lighter for the same MBL.
- Safer and easier to assemble offshore, whether vertically or horizontal and will save hours on the vessel – sub-connectors are spliced into the end of rope at the factory ensuring the quality of the splice.
- Easier to run and retrieve across stern rollers and on anchor handling vessels.

A joint development of Lankhorst Ropes Offshore Division, First Subsea, a leading subsea mooring connector manufacturer and Offspring International deepwater mooring systems specialist, worldwide agent for Lankhorst Ropes Offshore Division, the LankoFirst fibre connectors (Patent applied) are designed and manufactured from the same materials, and to the same high quality standard, as First Subsea's subsea mooring connectors.

Flexible Rope Connections

For maximum installation flexibility, the LankoFirst connector is available as three types of connection:

- Clam – fibre rope to fibre rope (R2R) and fibre rope to chain (R2C): spliced rope enclosed within clam shell case.
- Snap - fibre rope to fibre rope (R2R): spliced ropes integrated with connectors during rope manufacture and simply snapped together offshore
- Link – fibre rope to fibre rope (R2R): spliced ropes integrated with connectors (female clevis head and male padeye) during rope manufacture and pin connection offshore.



LankoFirst Clam

MBL (tonnes)	Diameter (mm)	Length (mm)	Weight (kg)
800	740	750	1300
1350	880	830	2060
1750	960	890	2650
2100	1050	950	3540

Weights and dimensions are approximate and are subject to final analysis and design.

**How the Connector Works**

The LankoFirst rope-rope clam connector (illustrated below) works by taking the rope end splices made in the factory, incorporating the LankoFirst splice sub-connectors, and simply inserting them into the clam connector which is then bolted together to make the rope to rope mooring line connection.



Lankhorst *Ropes*
OFFSHORE DIVISION

**Lankhorst Ropes**

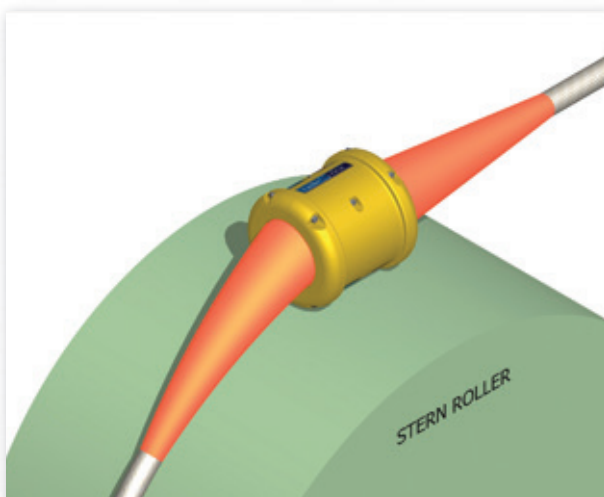
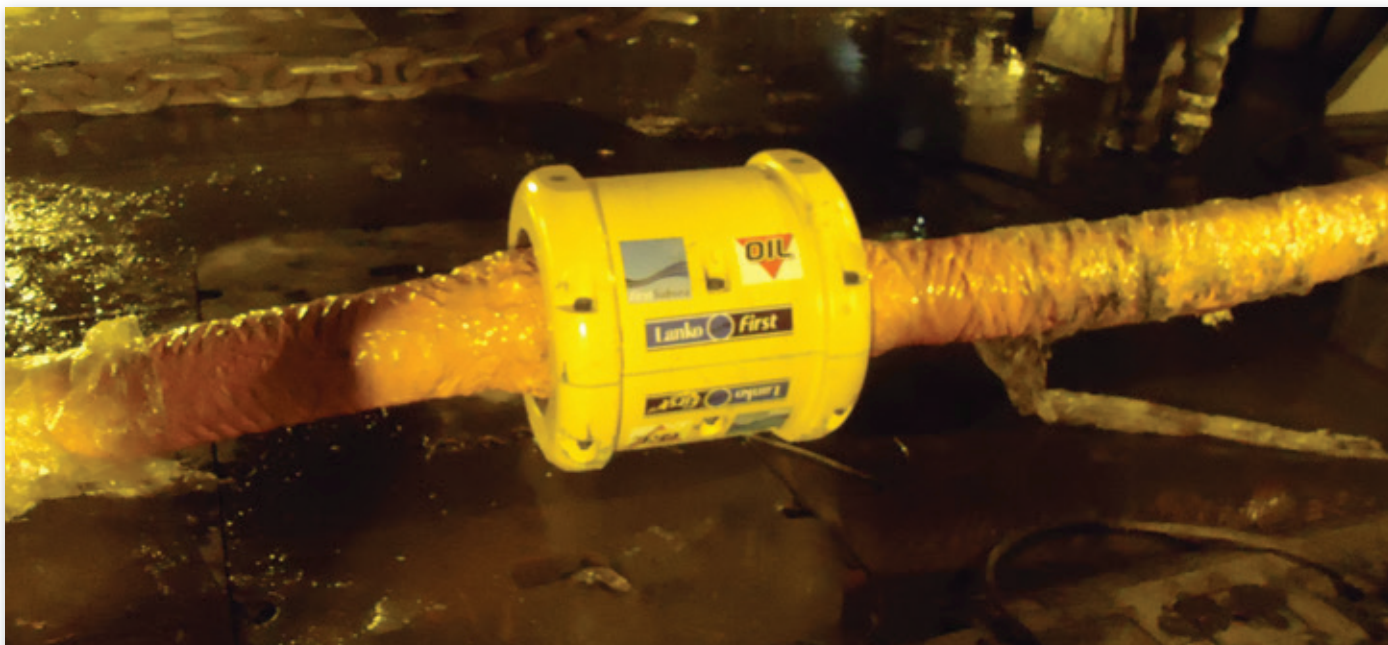
Lankhorst Ropes is a member of the Royal Lankhorst Euronete Group. With more than 200 years of experience and 1,200 employees, we are a worldwide innovative group with fully equipped production sites and R&D departments, located in The Netherlands, Portugal, Greece and Brasil, for the production of a wide range of products in maritime and offshore ropes, technical yarns, fishing / yachting gear, Pure composites, recycling and moulding materials. In July 2012, the Royal Lankhorst Euronete Group was acquired by WireCo WorldGroup, of Kansas City, Mo, USA. WireCo WorldGroup is the global leader in manufacturing, engineering, and distributing wire rope, wire rope assemblies, synthetic rope and electromechanical cable. With true global reach, WireCo WorldGroup can deliver the right products for your equipment and application no matter where your worksite might be.

**First Subsea**

First Subsea Ltd is a leading supplier of subsea connection and mooring systems for deepwater platforms, FPSOs, FPU's and subsea field buoys. The company's Ballgrab ball and taper connection system is used in over 250 subsea mooring connection installations on 30 projects worldwide, including Kerr McGee's Constitution, Gunnison and Red Hawk SPARs, Murphy's Kikeh and Thunder Hawk projects, Total's Dalia and Akpo projects, Tullow's Jubilee and BP's Block 31, StatoilHydro's Peregrino FPSO buoy, and Shell's Perdido development.

**Offspring International**

Offspring International Ltd is a leading mooring systems company for both single point mooring and deepwater polyester rope moorings. It is the worldwide agent for Lankhorst Ropes Offshore Division, the world's No.1 manufacturer of deepwater polyester mooring tethers. Offspring International's deepwater projects include Chevron's Tahiti Spar, Anadarko's Lucius Spar, Murphy Oil's Thunder Hawk floating production unit, Petrobras America's Cascade Chinook FPSO in the Gulf of Mexico and other projects worldwide.



LANKHORST ROPES – Offshore Division

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