

## Lynx™ Bend Stiffener Connector

The Oil States Lynx™ Bend Stiffener Connector (BSC) is part of our new generation of connections specifically designed for deep water floating production, storage and off-loading systems (FPSOs); tension leg platforms (TLPs); and pipelines.

Extensively tested for durability and effectiveness, the Lynx™ BSC offers a cost-effective, streamlined way to join the Bend Stiffener to the turret sections of an FPSO, FPS, TLP or Spar.

Lynx™ connector technology has been proven in conductor and casing applications worldwide and enables the riser/bend stiffener assembly to be efficiently pulled into an I-tube and connected to the tube bottom. The riser can then be released and tied into the topside manifold. The entire process is achieved without the use of divers or ROV intervention.

## Lynx™ BSC Advantages

- Operates without ROV or diver intervention
- Prevents costly damage to flexible riser during pull-in
- No special tooling or personnel required
- Single-wire pull-in minimises rigging and vessel requirements
- Remote hydraulic quick-release option for fast emergency response
- Automatic make-up during riser pull-in speeds installation
- Confirmation of make-up
- Suitable for a range of riser and I-tube configurations

## Rapid Assembly & Deployment

The Lynx™ BSC is rapidly assembled using the riser pull in. No external tools are required.



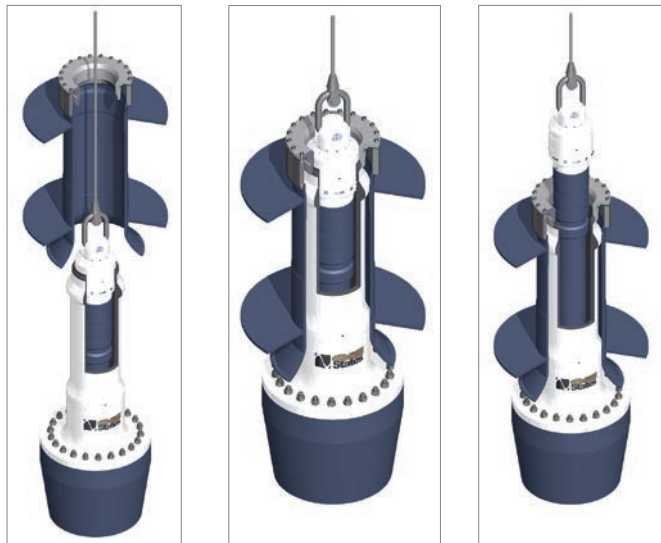
Lynx™ BSC | Risers range from 6" - 12" and I-Tube sizes from 0.838 - 1.04 ID

The main components of the Lynx™ connector are contoured to ensure easy stab-in. Alignment takes place prior to connector engagement, preventing costly rework.

1. The riser is pulled up from the seabed and is poised for alignment with the funnel. The guide nose, followed by the upper centraliser, enters the funnel.
2. The riser is fully centralised and the Lynx™ connector engaged by an approximately 5 MT over-pull.

## Rapid Assembly & Deployment

1. The riser pull-in head/riser assembly is released from the Lynx™ using riser back tension.
2. On remote release, the pull-in head is re-latched into the riser hang-off unit. The complete assembly is then released hydraulically from the I-tube by activating the lock ring release mechanism.



Stage 1

Male Lynx™ BSC assembly pulled into Female Lynx™ BSC. Assembly attached to vessel.

Stage 2

Male Lynx™ BSC assembly latched into Female Lynx™ BSC assembly.

Stage 3

End Termination and Flexible Riser released and pulled through to topside for vessel integration.

Oil States Industries (UK) Ltd is a world leader in the design and manufacture of advanced connection systems for offshore use.

Track Record		
Riser Size	No. of Risers	I-Tube Size (m)
<b>2014/15 BP, Quad 204</b>		
11" Water Injection	2	1.04 ID
9.5" Production	12	1.04 ID
9.5" Water Injection	1	1.04 ID
7.4" Production/Test	3	1.04 ID
7.4" Gas Lift/Injection	3	1.04 ID
Dynamic Umbilical	2	1.04 ID
<b>2011 BP, Skarv</b>		
8" Oil Production	2	1.04 ID
10" Production	5	1.04 ID
10" Gas Injection Riser	2	1.04 ID
12" Export Riser	2	1.04 ID
Dynamic Umbilical	2	1.04 ID
Direct Electrical Heating	1	1.04 ID
<b>1998-2009 BP, Schiehallion</b>		
7.4" Gas Injector Riser	2	0.914 ID
7.4" Production & Gas Lift Riser	4	0.914 ID
9.5" Oil Production	5	0.914 ID
9.5" Water Injection Riser	2	0.914 ID
10" Umbilical	2	0.914 ID
11" Water Injection	1	0.914 ID
Dynamic Umbilical	4	0.914 ID
<b>1997 Texaco, Galley</b>		
6" Riser	4	0.838 ID
7.63" Riser	1	0.838 ID
9.75" Riser	1	0.838 ID

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