



**Spring-lok™**



**C-lok™**



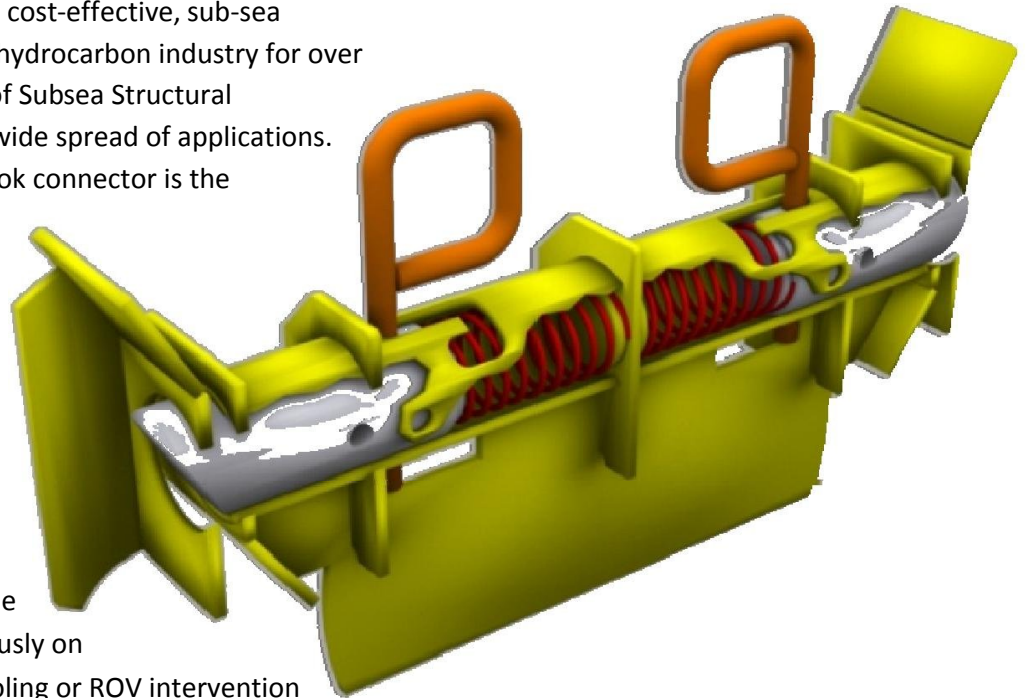
**Spring-blok™**

Providing Diverless Connectors Since 1999

# Spring-blok™

Britannia has been providing cost-effective, sub-sea connections to the offshore hydrocarbon industry for over a decade. We offer a range of Subsea Structural Connector types covering a wide spread of applications. Our 'pile and forget' Spring-lok connector is the industry leading self activating diverless structural connector.

The **Spring-blok** is a self activating Pin Connector designed for subsea applications where remote and reliable mechanical connections are required. The device operates instantaneously on engagement, requires no tooling or ROV intervention and is releasable and reusable as needed.



Spring-bloks deployed over the Stinger



Spring-bloks Armed with Pins Released

Contact us about our full range of sub-sea connectors:

**Spring-lok™ Spring-blok™ C-lok™**

Britannia Engineering Consultancy Ltd.  
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P.O. Box 99  
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Direct Telephone Enquiries: +44 (0)7930974491 or +44 (0)7980862647



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### Spring-blok BENEFITS:

- **Self activating**  
Spring-blok operates instantaneously on engagement of male/female units.
- **Cost-effective**  
Requires no tooling or ROV intervention  
Units are reusable as needed  
Swift development and production
- **Highly flexible**  
Available in single units, complimentary/opposing pairs or in multiple radial arrangements.  
Releasable, reversible engagement  
Retractable units for easy release  
Custom designed helical spring drives the pin in any orientation
- **Clear Engagement Indication**  
The status of the locking device is visible at all stages.
- **Reliable**  
High strength offshore rated materials and fabrication specifications.  
Full FAT/SIT ensures trouble-free offshore operations.

### Spring-blok APPLICATIONS:

- PLET arms to fix rotating mudmats
- Articulation arms
- Structural sub assembly attachment
- Submerged riser connections

### Spring-blok DESIGN OPTIONS:

- Pin sizes are available in bar size from 30mm to 250 diameter rated to transfer pin shear from 5 Te to in excess of 1000 Te.
- Numerous 'off the shelf' designs available immediately.
- Customised designs can be developed at short notice.
- If required the Spring-blok may be activated via a simple ROV operation

### Spring-blok FABRICATION:

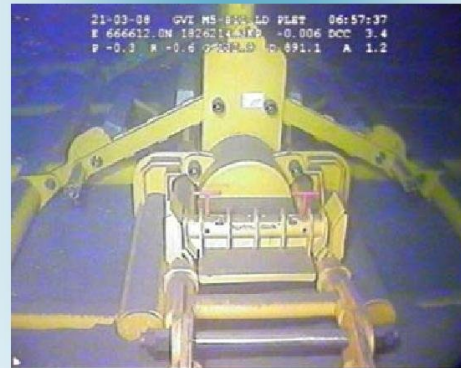
- Fabrications are carried out under a fully implemented BS EN ISO 9001 approved Quality Management System.
- The units are checked and adjusted before a fully documented FAT is carried out.
- The units are preserved and crated prior to shipment to the Purchasers main structural fabricator.

### CASE STUDY

The key benefit of this customised design is the speed with which the units are able to be developed, fabricated and deployed.

The units are task specific and address the most demanding of Purchasers requirements. The designs provide tailored functional performance for the required load transfer capacity. High strength offshore rated materials and fabrication specifications plus full FAT/SIT offers quality assured performance to ensure robust trouble-free offshore operations.

For the KGD6 Reliance Project 34 units were required. The units were designed ,fabricated, tested and operational at 1200m water depth within 5 weeks of the enquiry.



Spring-bloks Engaged at 1200m

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