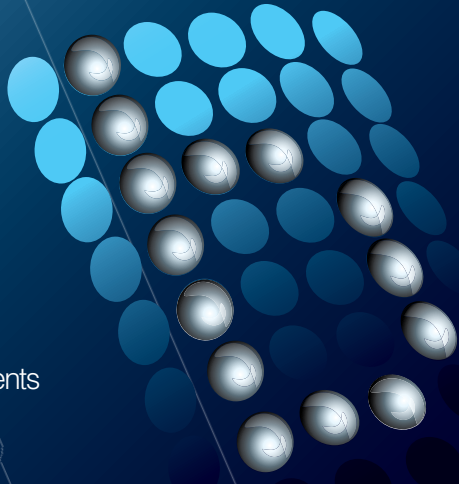


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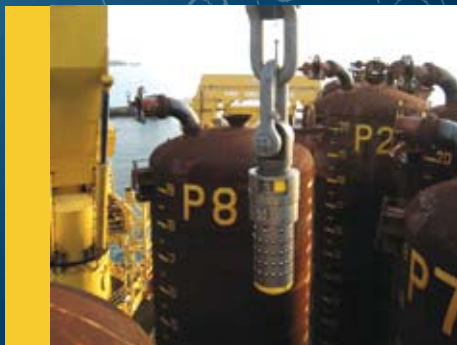
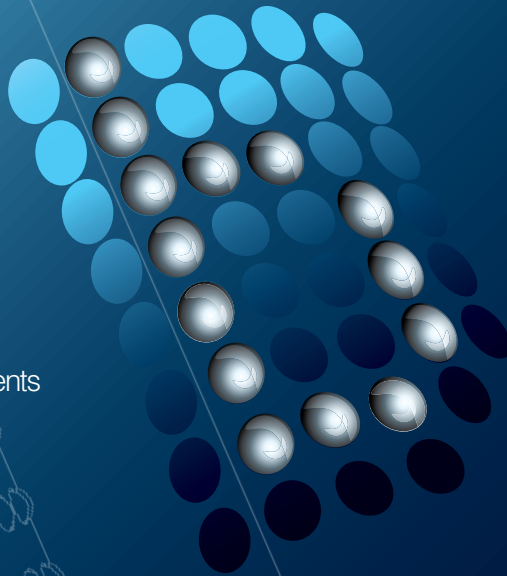
Mechanical connectors for hostile environments



Lifting and Installation Tools

Balltec

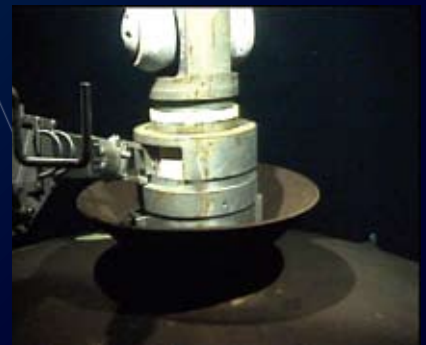
Mechanical connectors for hostile environments



1.



2.



3.

Balltec BREM Suction Pile with optional Remote Release Collar

- Image 1. Balltec BREM Suction Pile Deployment Tool prior to pile installation
- Image 2. BREM Suction Pile Deployment Tool inserted
- Image 3. Simple subsea release with a minimum of ROV intervention.

Balltec BREM A&R Tool and Receptacle used during Stevtensioning on the Vincent Project

- Image 4. A&R Receptacle and Tool being deployed overboard
- Image 5. Use of Balltec equipment throughout this operation enabled the reaction anchor to be left subsea during the tensioning of different anchors
- Image 6. Balltec equipment was used successfully during stevtensioning of all nine anchors, vastly reducing the operational time

Lifting and Installation Tools

Balltec's BREM ball engagement tools provide a simple, robust, high capacity method of connecting and disconnecting heavy loads to lifting devices. As a purely mechanical device containing no hydraulics and requiring the minimum of ROV intervention this technology is ideally suited for the deployment or retrieval of equipment to and from the sea floor.



4.

Designed to internally grip a range of pipe sizes, traditional lifting lugs are simply replaced with a short length of pipe to suit the BREM lifting tools.

Due to our in house design and test facilities, bespoke equipment can be supplied quickly for almost any application. Tools with high side load capacities (for suction pile upending etc) are also available.

Supplied with a tapered stabbing cone for ease of installation into receptacle pipe both topside and subsea.

Safety

The BREM ball engagement design is fail-safe. Under load it cannot be accidentally released.

Accessories

The tools can be supplied with a broad range of accessories to suit particular applications these include:



5.

Remote Release Collar - Radio controlled release mechanism allowing disconnection without any physical intervention (only under zero load condition). Currently used for placing suction pile in vertical stillage on board construction vessels.

Hydraulic Release Mechanism - allowing crane operator to release tool (again only under zero load condition).

Technical Specification

SWL - Current Rental Fleet includes lifting tools up to 1000mT - larger capacities can be supplied upon request.

Materials - All load bearing components are manufactured from high tensile forged bar.

Class - All BREM lifting tools are designed, manufactured and tested in accordance with DNV Rules for Certification of Lifting Appliances.



6.

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Balltec Track Record

- 1. Technip (USA)**
Suction Pile Deployment Tool - 225mT Axial SWI with 125mT SWL side load.
- 2. Intermoor Inc**
ATP (USA), Mississippi Canyon Block 711, FPA Project ("Gomez")

Two 350mT SWL Lifting Tools for deployment of Subsea Mooring Connector Receptacles and associated mudmats for use with Intermoor SEPLA anchors.
- 3. Intermoor Inc**
Murphy Oil (Malaysia) "Kikeh" Field, Development Drilling Program

Two 350mT Lifting Tools for deployment of Subsea Mooring Connector Receptacles and associated mudmats for use with Intermoor SEPAL anchors.
Two 350mT Axial SWL with 125mT side load Suction Pile Deployment Tools.
- 4. Petroleum Development Consultants Pty Ltd**
"Puffin" Field - Australia

Two 600mT SWL Lifting Tools for deployment of Subsea Mooring Connector Receptacles & associated mudmats for use with drag embedment anchors.
- 5. Intermoor Inc**
BP (USA) Development Drilling Program

One 350mT SWL Lifting Tool for deployment of Subsea Mooring Connector Receptacles and associated mudmats for use with Intermoor SEPLA anchor.
- 6. SBM**
Two 250mT axial SWL Suction Pile Deployment Tools with 125mT side load SWL. Both tools were supplied with a radio operated release mechanism allowing suction piles to be lifted from the horizontal position on the dockside & placed in a vertical racking system on board a construction vessel.

Release of the gripping mechanism was carried out remotely using Balltec supplied equipment from the deck of the vessel, removing the need for offshore personnel to work at height to remove rigging.
- 7. Intermoor Inc**
ATP "Mirage" Project - Gulf of Mexico

Two 1000mT SWL A&R Tools used for the deployment of Subsea Mooring Connectors and "Hang off" clip assembly for use in conjunction with driven piles.
- 8. Intermoor Inc**
Chevron Tombua Landana Project - West Africa

Two 400mT SWL Lifting Tools for deployment of Subsea Mooring Connector Receptacles and associated mudmats for use with Intermoor SEPLA anchors.
- 9. Intermoor Inc**
Shell BC-10 Block - Brazil

Two 200mT SWL Lifting Tools for deployment of Subsea Mooring Connector Receptacles and associated mudmats for use with Intermoor drag-embedment anchors.

Two 10mT SWL Mudmat Retrieval Tools to enable the recovery of the mudmat to the surface following receptacle installation.
- 10. Prosafe**
Apache Van Gogh Project - Australia

700mT SWL DTM Buoy retrieval tool.

Track record correct as of February 2009
