



Institution of
**MECHANICAL
ENGINEERS**



Aberdeen Section
www.spe-uk.org



Hot and Cold – Assuring Fit for Purpose Joints – Welded and Non-Welded Connections Good Practice, Qualification, Assurance and Testing Event

M5 flyable Monobore Connection Systems

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Energy Products

3rd Mar 2021

Agenda

- Safety moment
- About Oceaneering
- M5 Connectors
- Applications
- Ancillary Tools and Equipment
- Contact Details

Don't Take Pain Sitting Down

Poor posture produces persistent pain

- Sit with your back in its natural curve, supported by the chair back.
- Adjust the seat height so your forearms rest naturally at desk level.
- Adjust your computer screen so that the top edge is level with your eyes.
- Place feet flat on the floor or on a footrest.





About Oceaneering

Oceaneering pushes the frontiers of deep water, space, and motion entertainment environments to execute with new, leading-edge connections to solve tomorrow's challenges, today.



Note: 2018 Q2

Worldwide Locations

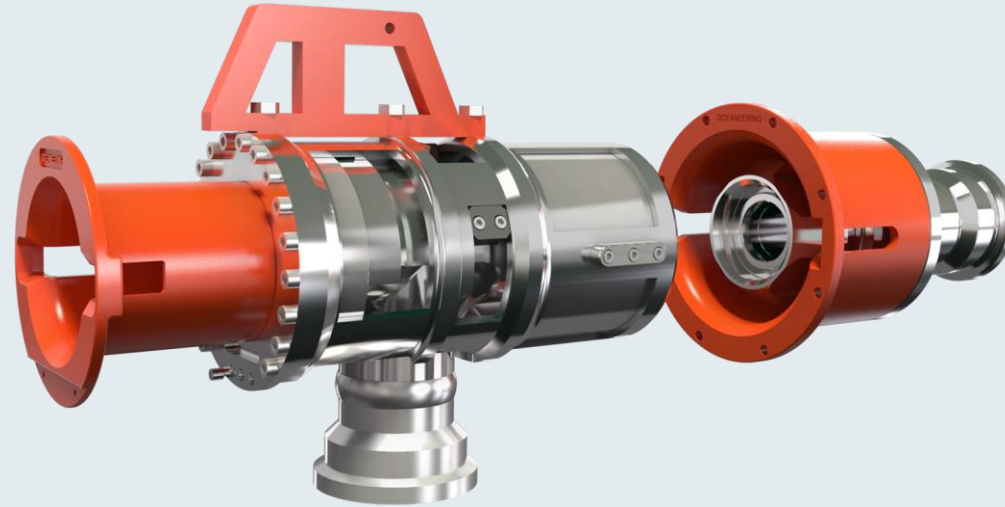


M5 Monobore Connection

ROV Monobore Connector (M5)

Gas Lift, Intervention, and Chemical Injection

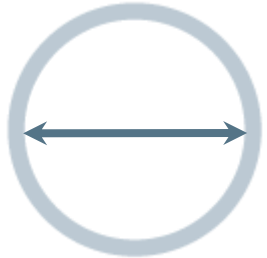
- Fly to Place, eliminates metrology
- Latching Mechanism, 25 make/breaks
- Designed by ROV Tooling Experts
- Available in EE or HH trim



Up to 15,000 psi



2in and 3in
Through Bore



API 6A, PR2,
API 17D
Qualification



Grayloc Metal
Seal



Concepts Designed

2003

2in Version Commercialization

2004

2005-15

3in Version Released

2016

2017

Patent US7380835

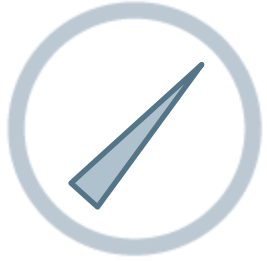
API Qualification

ROV Monobore Connector (M5)

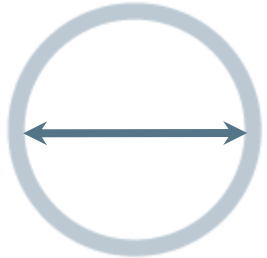
Gas Lift, Intervention, and Chemical Injection

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Grayloc Metal Seal



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API Qualification

Applications



High-flow chemical delivery



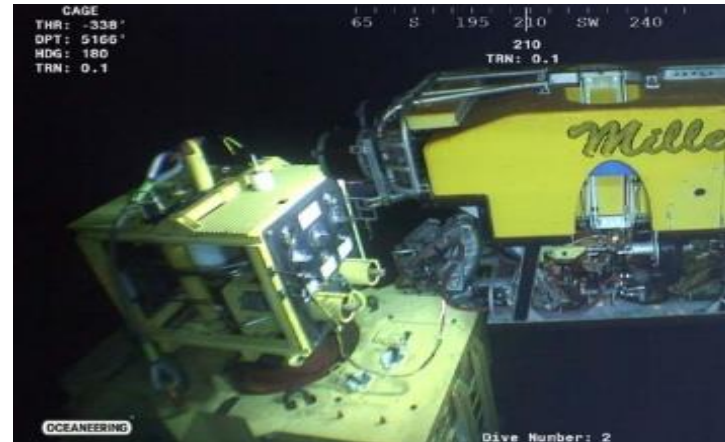
Gas Lift



Intervention Access Point



Hydrate Remediation

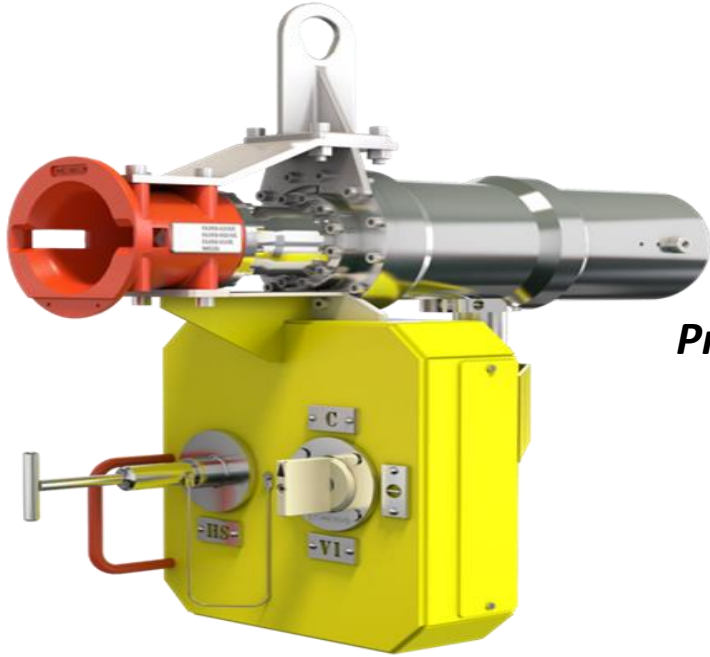


Well Stimulation

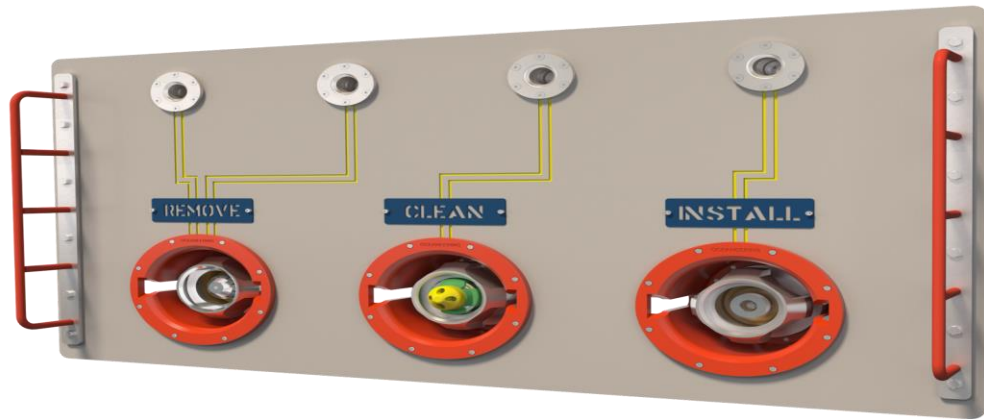
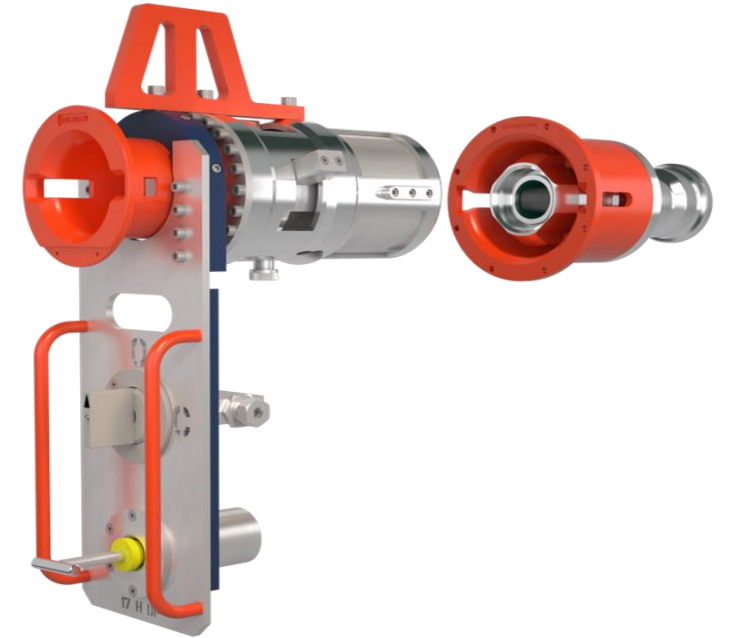


Commissioning/Decomm

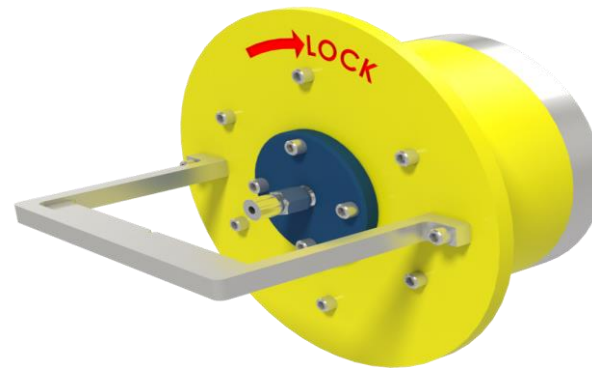
Complete Connection System – Ancillary Tools & Equipment



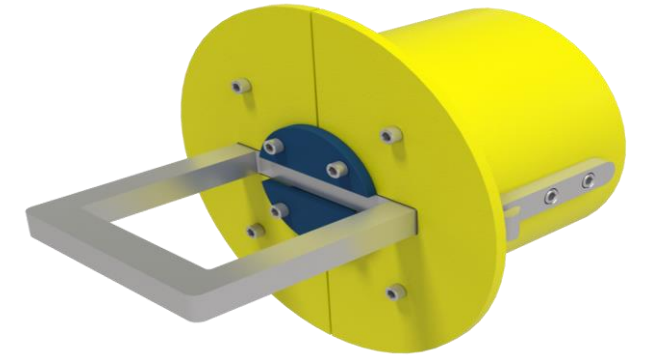
Pressure Cap w/ Isolation Valve and Hot Stub



Subsea Gasket Replacement



Fluid Retaining Cap



Marine Growth Cover

Contact Details

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An aerial photograph of a large offshore supply vessel, likely a tugs and barges tug (T/B), sailing on the open ocean. The vessel is dark-colored with a white superstructure. It has a helipad on the deck and various pieces of equipment. The sky is a mix of orange and grey, suggesting a sunset or sunrise. The water is dark with some whitecaps.

OCEANEERING®

Connecting What's Needed With What's Next™