



Document title:  
**Grouted Member  
Clamps  
Technical Data Sheet**

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## Grouted Member Clamps

### Introducing Formshore's Innovative Structural Grouted Clamp

Formshore is proud to unveil our cutting-edge solution designed to bolster the structural integrity of offshore structures facing heightened loads beyond their initial design parameters. Our structural grouted clamp is engineered to address challenges arising from increased topside equipment demands or scenarios involving seabed subsidence.

#### Key Features:

1. **Enhanced Structural Support:** Our grouted clamp offers a reliable means of reinforcing structural members subjected to additional loads, ensuring they meet performance expectations even under increased stress.
2. **Versatility:** Formshore has developed three distinct types of clamps, each operating on the same fundamental principle. This diversity allows for tailored solutions to suit varying project requirements and structural configurations.
3. **Advanced Engineering:** Leveraging state-of-the-art engineering principles and materials, our clamps are meticulously designed to withstand the demanding conditions of offshore environments, providing long-lasting support and stability.
4. **Ease of Installation:** With user-friendly installation procedures, our clamps can be seamlessly integrated into existing structures, minimizing downtime and streamlining project timelines.

#### Applications:

- **Platform Strengthening:** Our structural grouted clamp can fortify platform members to accommodate increased topside equipment loads, ensuring continued structural integrity and operational safety.
- **Subsidence Mitigation:** In scenarios where seabed subsidence poses a risk to structural stability, our clamps offer an effective solution to reinforce vulnerable members and maintain structural resilience.

#### Trust Formshore for Innovative Structural Solutions:

Formshore is dedicated to delivering innovative solutions that empower offshore industries to overcome structural challenges effectively. Contact us today to learn more about our structural grouted clamps and how they can enhance the performance and longevity of your offshore structures.

# Structural Repair Clamps

Our structural grouted clamps are meticulously engineered to provide seamless installation and maximum effectiveness in reinforcing offshore structural members. Designed with practicality and efficiency in mind, our clamps feature several key elements to simplify the installation process and ensure optimal performance.

## Key Design Features:

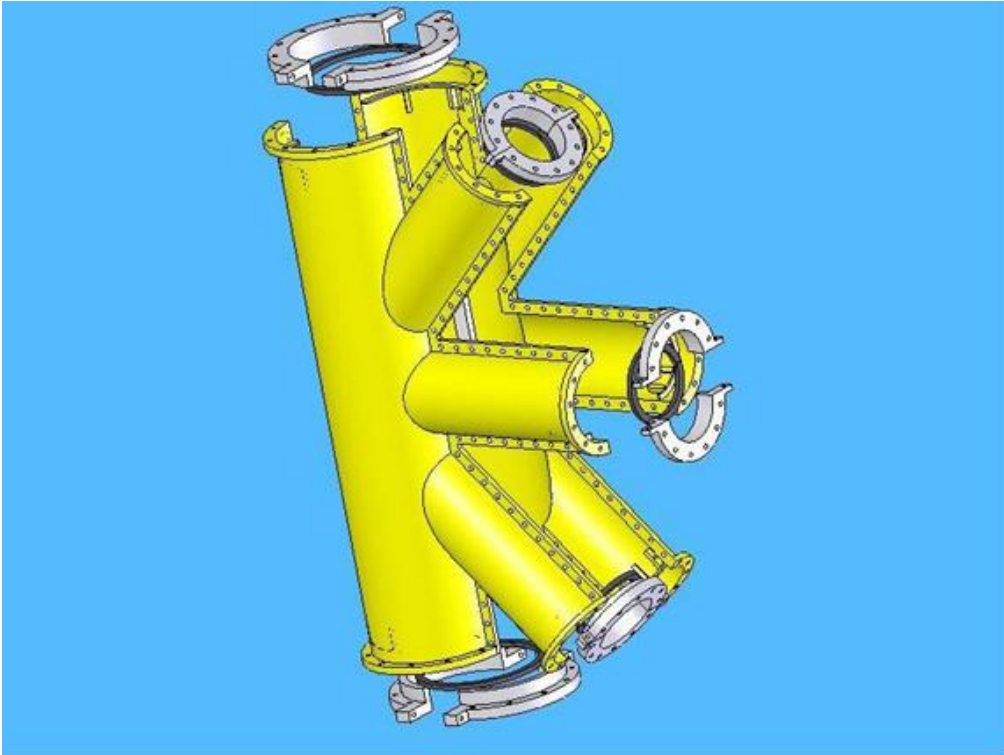
1. **Oversized Design:** Our clamps are intentionally oversized compared to the original diameter of the members. This deliberate sizing facilitates ease of installation and minimizes potential interference from doubler plates or anode stub attachments, ensuring a smooth and efficient installation process.
2. **Alignment Annulus:** Each clamp is equipped with an alignment annulus, which serves a dual purpose. Not only does it centralize the clamp onto the structural member, but it also houses the grout sealing ring, ensuring a secure and watertight seal.
3. **Preinstalled Keyways:** Welded into the ends of the clamps are preinstalled key ways, strategically positioned to assist in aligning the alignment annulus and promoting optimal adhesion of the grout. This feature streamlines the installation process and enhances the structural integrity of the connection.
4. **Hinged Design:** The clamps feature a hinged design along the longitudinal member location, further facilitating the installation process. This innovative design element simplifies handling and positioning during installation, saving time and labor costs.
5. **Optional Hydraulic Actuator:** For added installation convenience, our clamps can be equipped with a hydraulic actuator. This optional feature allows for remote operation via divers using a hydraulic hot-line or via an ROV with a hot stab, providing flexibility and versatility in installation methods.

## Trust Formshore for Efficient and Reliable Structural Solutions:

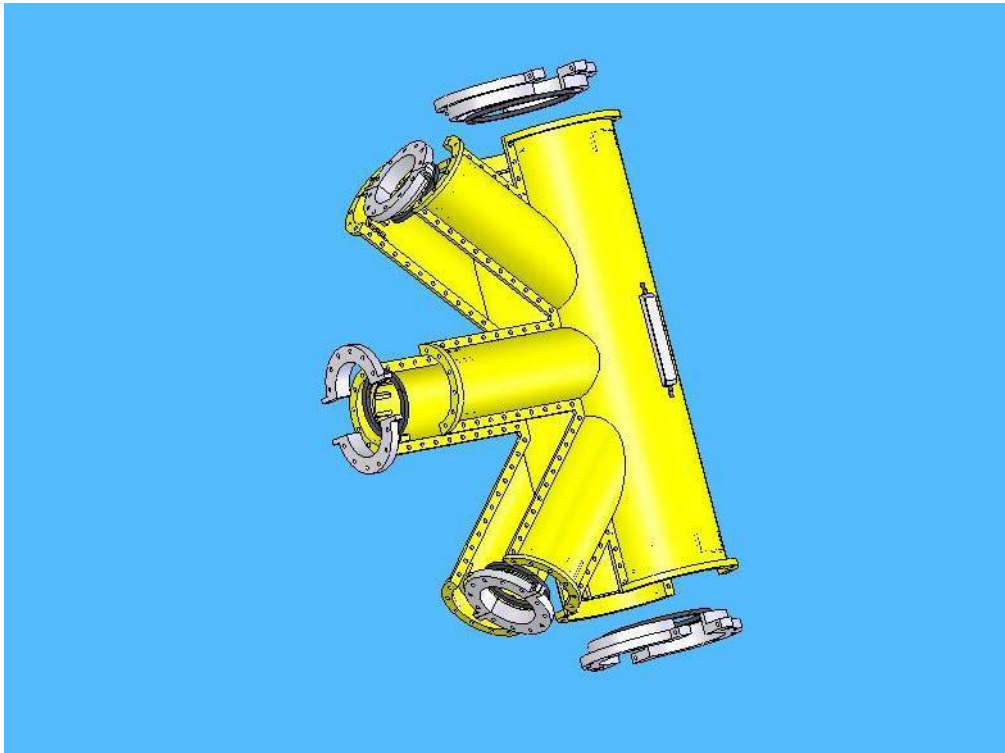
At Formshore, we are committed to delivering practical and effective solutions to meet the unique challenges of offshore structural reinforcement. Contact us today to learn more about our innovative structural grouted clamp system and discover how we can enhance the integrity and longevity of your offshore structures.



## Type 1 Clamp – Exploded View 1



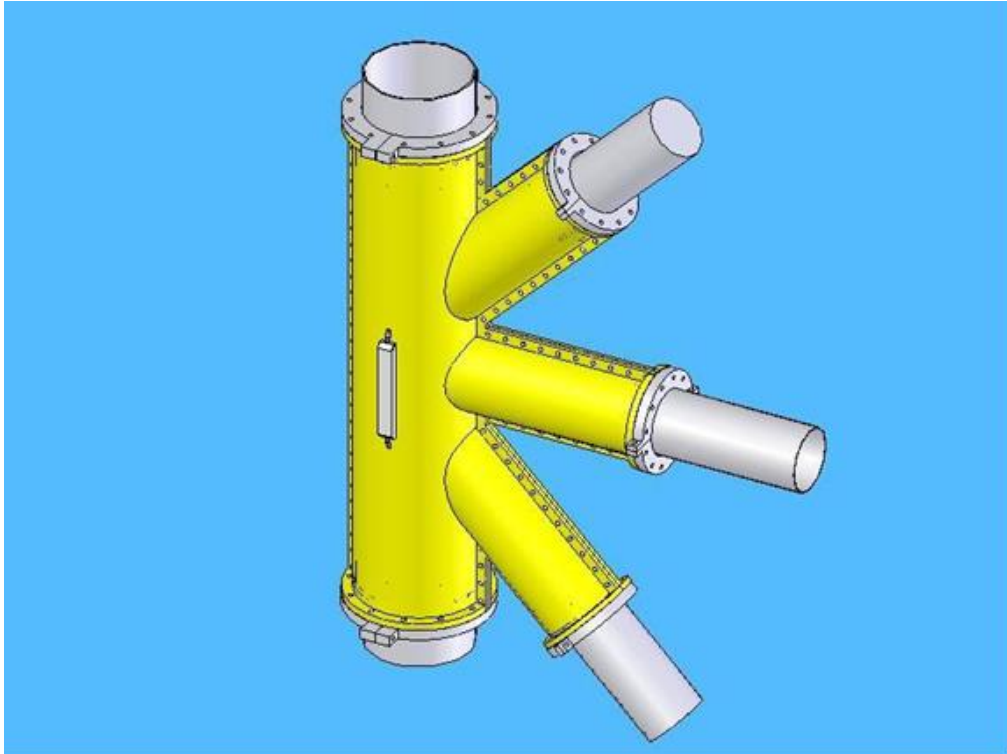
## Type 1 Clamp – Exploded View 2



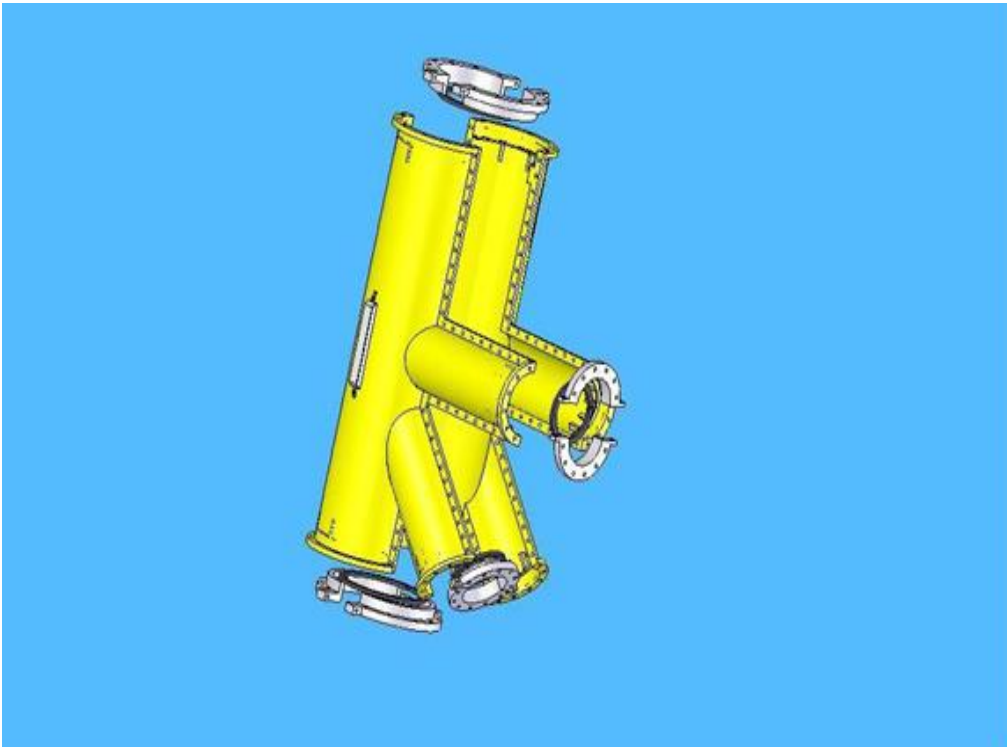


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## Type 1 Clamp - Installed View 3



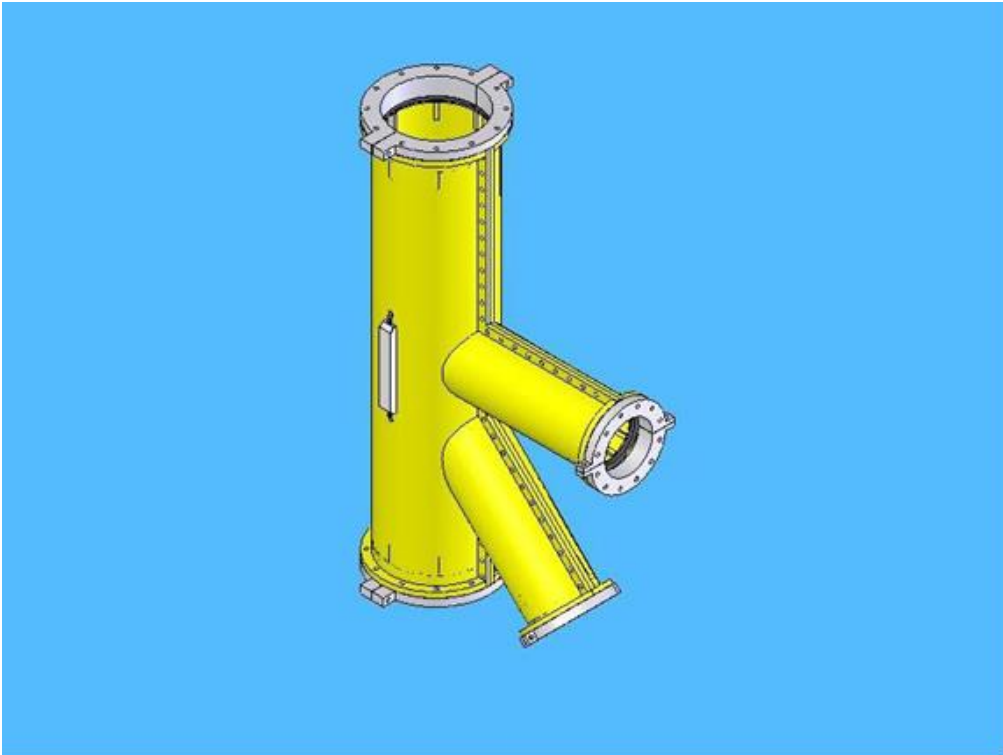
## Type 2 Clamp - Exploded View 1



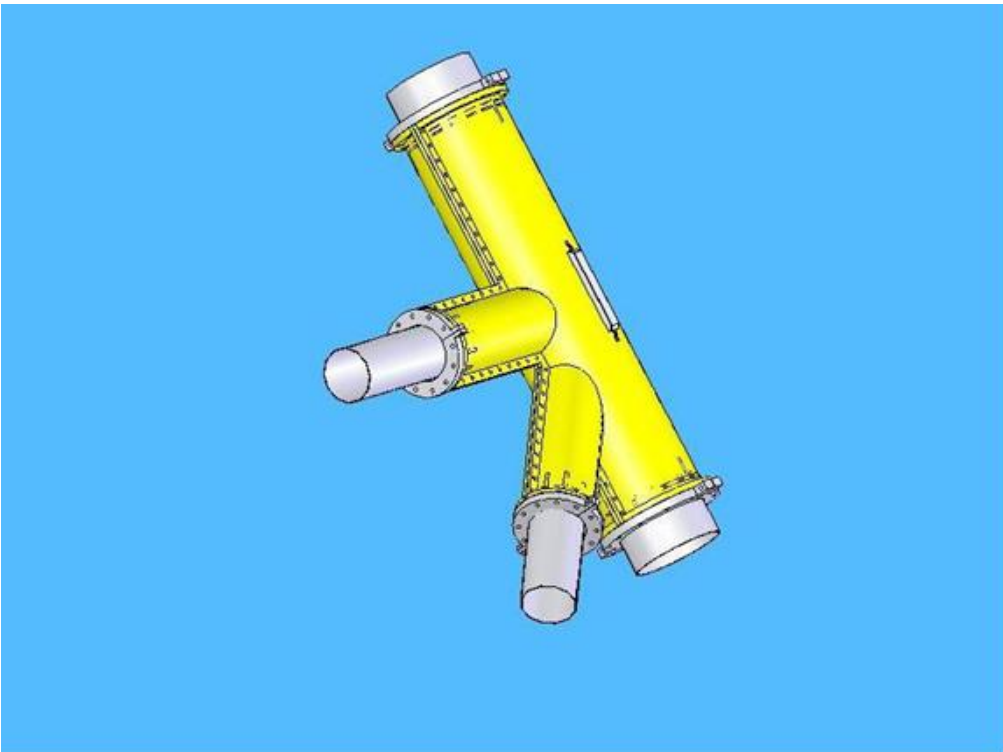


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## Type 2 Clamp – Closed View 2



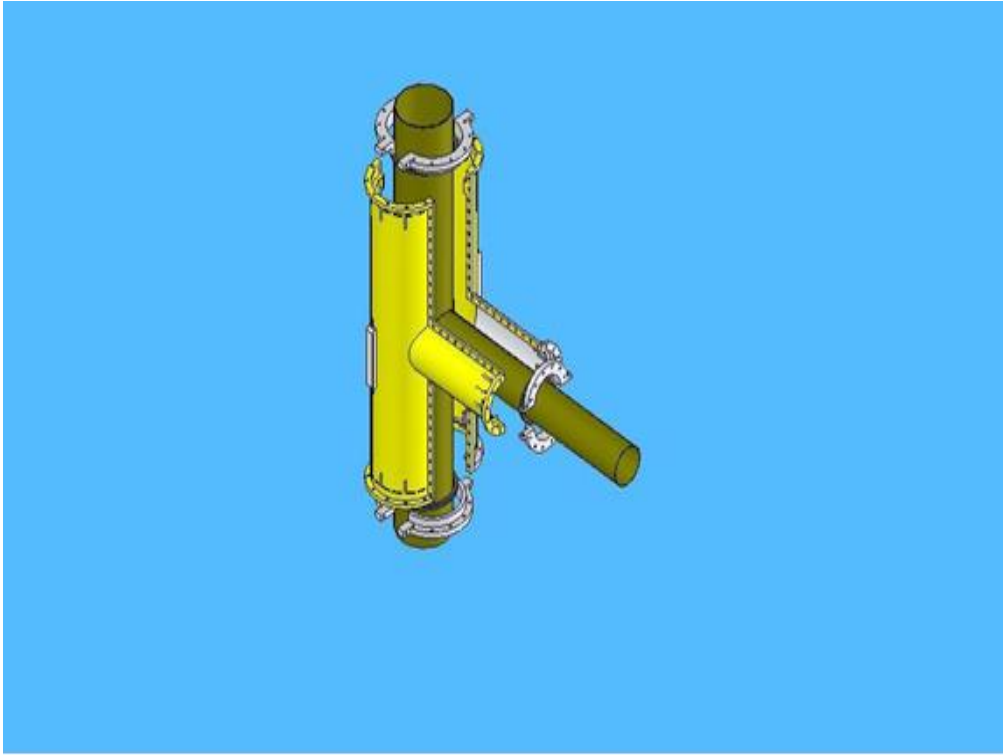
## Type 2 Clamp – Installed 3



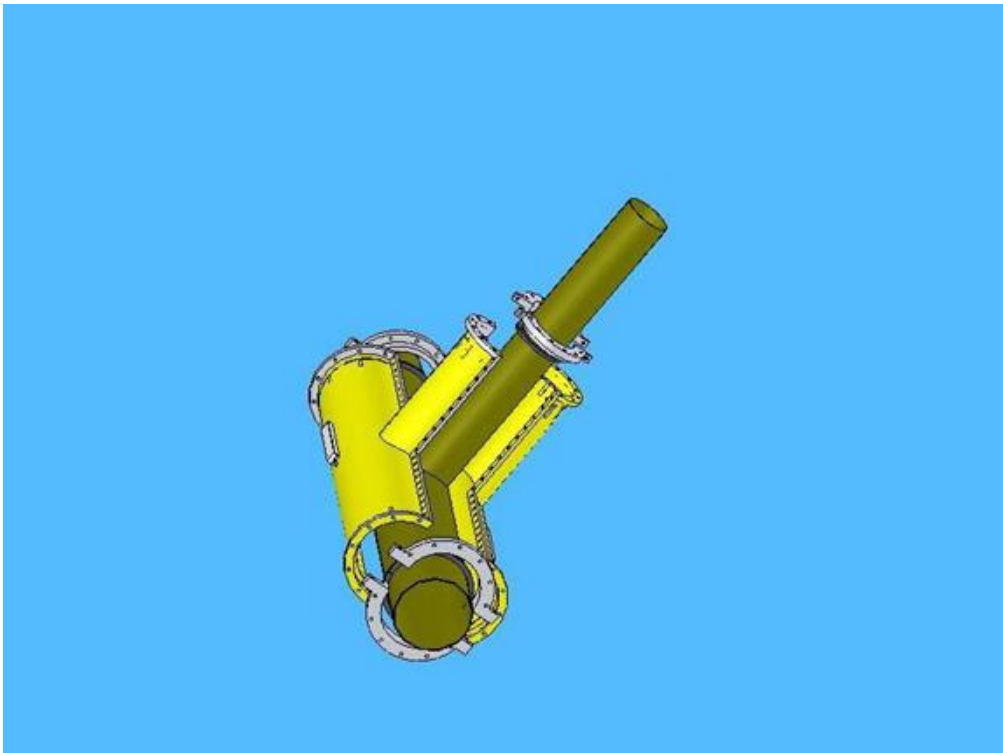


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## Type 3 Clamp – Exploded View 1



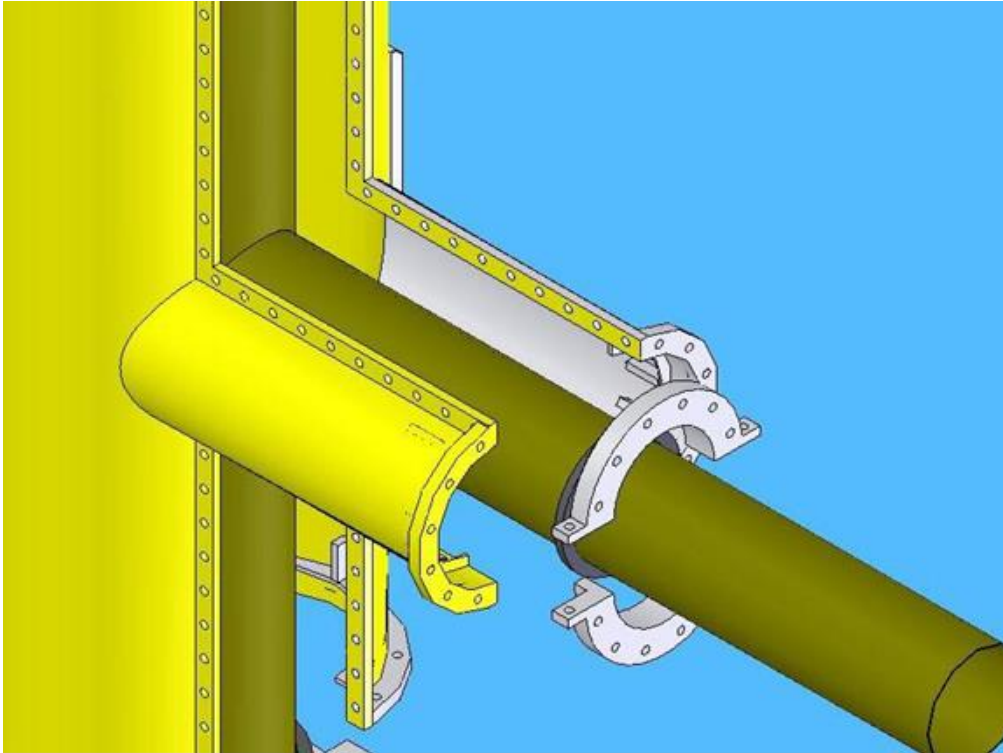
## Type 3 Clamp – Exploded View 2



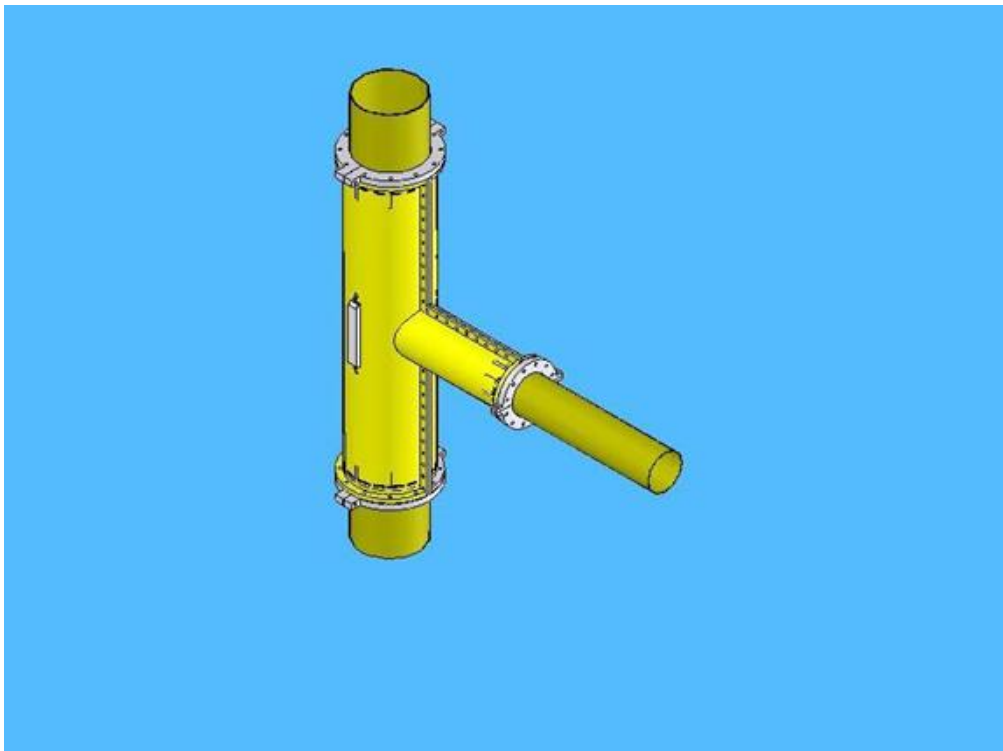


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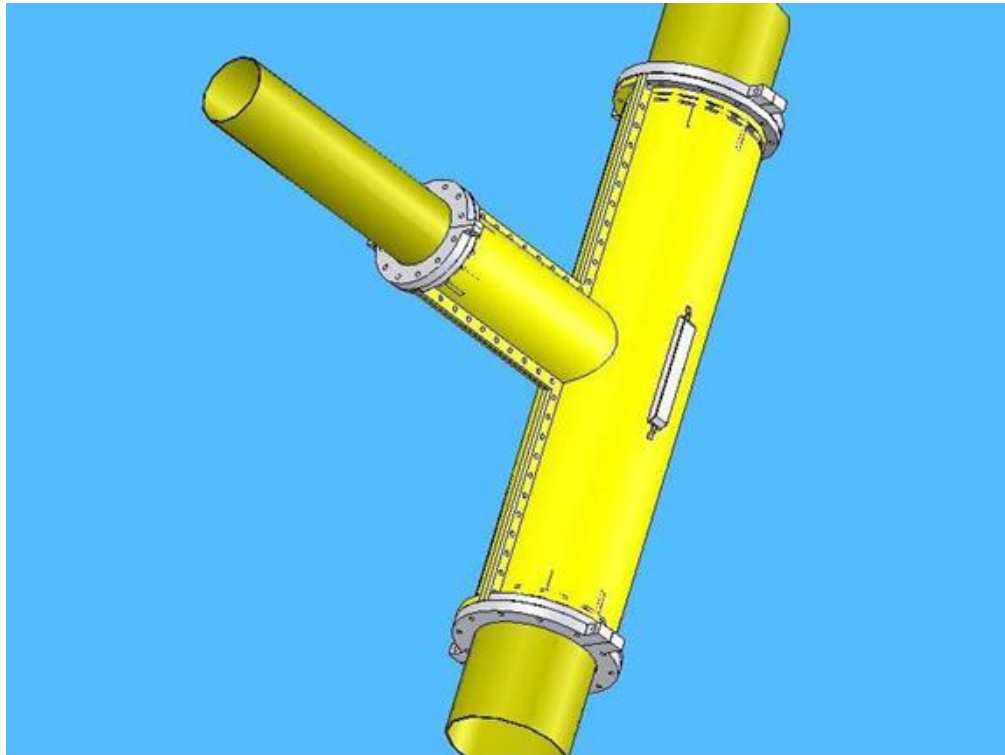
### Type 3 Clamp – Exploded View 3



### Type 3 Clamp – Installed View 4



## Type 3 Clamp – Installed View 5



### Pipeline Repair Clamps

At Formshore, our innovative clamp design isn't just limited to structural reinforcement—it's also highly adaptable for pipeline grout repairs. In addition, we offer a comprehensive range of pipeline remediation products, including grout bags and mattresses, designed to stabilize pipelines and ensure long-term integrity.

#### Key Features:

1. **Versatile Design:** Our clamp design, based on a proven principle, can seamlessly transition to address pipeline repair needs. This versatility allows for efficient and effective structural grout repairs to pipelines, minimizing downtime and maximizing operational uptime.
2. **Comprehensive Product Range:** Formshore manufactures a full suite of pipeline remediation products, including grout bags and mattresses. These items are custom-manufactured to suit specific locations and can be fabricated in any required size, ensuring tailored solutions for pipeline stabilization.
3. **Installation Flexibility:** Our pipeline repair products can be installed either by skilled divers or remotely operated vehicles (ROVs), providing flexibility to suit project requirements and environmental conditions. This versatility ensures that our solutions can be deployed in a variety of offshore settings with ease.



For More Information:

For further details on Formshore's range of structural and pipeline repair clamps, as well as our comprehensive pipeline remediation products, contact us today. Our team of experts is ready to assist you in finding the right solutions to meet your offshore structural and pipeline repair needs.

**Contact**

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