

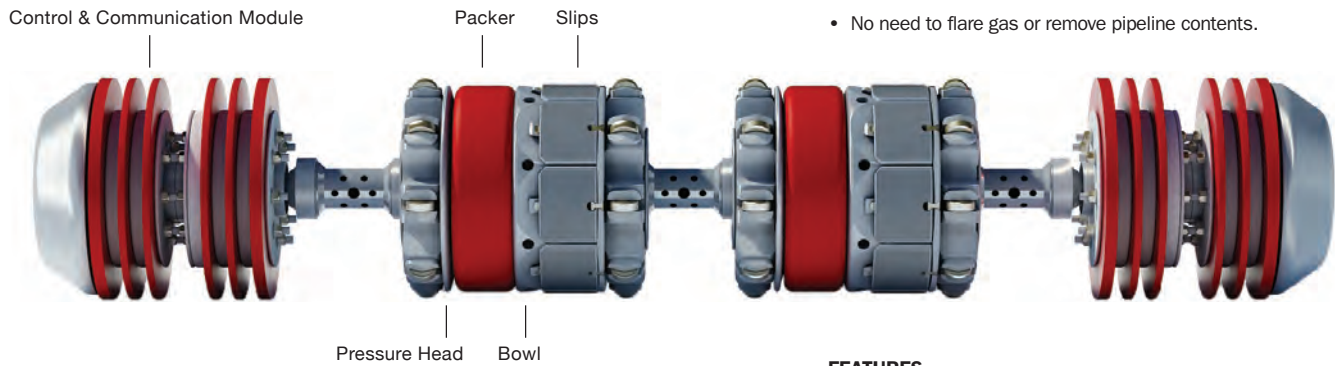


Pipeline Performance™



Offshore Pipeline Solutions

Traditionally, hydrostatic testing of new pipe work takes place after an isolation operation is completed, causing delays. However, with its optional third plugging module, the SmartPlug® tool is the only system of its kind that makes it possible to test pipe work immediately after isolation, saving time and money.



BENEFITS

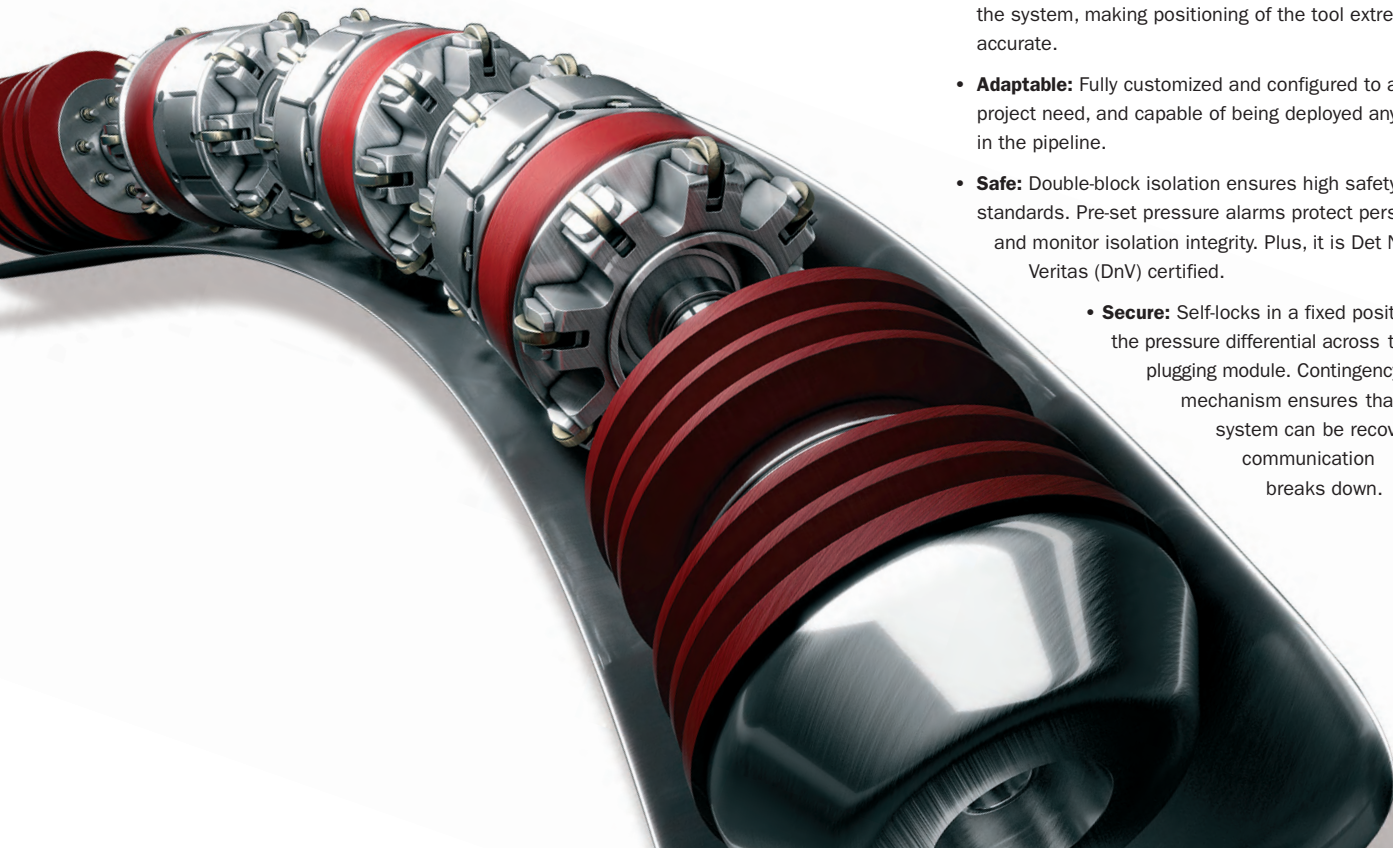
The SmartPlug® isolation method helps customers save money while protecting the environment. Intervention and repairs are completed with minimum disruption, meaning that:

- Blow down volume is eliminated or drastically reduced, minimizing release of hydrocarbon vapors.
- No need to treat chemicals or dispose of contaminated water before re-commissioning.
- No holes or potential leak points are left at the isolation location.
- Risk of accidental flooding during construction of offshore pipelines is eliminated.
- No need to flare gas or remove pipeline contents.

FEATURES

- **Highly Piggable:** Bi-directional pigging functionality through flexible pipelines.
- **Versatile:** Can be used in every standard pipeline diameter (8" to 48") with any pipeline content or medium.
- **Intelligent:** Remotely operated SmartTrack™ system with ELF technology activates, tracks and operates the system, making positioning of the tool extremely accurate.
- **Adaptable:** Fully customized and configured to any project need, and capable of being deployed anywhere in the pipeline.
- **Safe:** Double-block isolation ensures high safety standards. Pre-set pressure alarms protect personnel and monitor isolation integrity. Plus, it is Det Norske Veritas (DnV) certified.
- **Secure:** Self-locks in a fixed position using the pressure differential across the plugging module. Contingency release mechanism ensures that the system can be recovered if communication breaks down.

OPEN



SmartPlug® isolation technology makes it possible to isolate pipelines at high operating pressures. This means that maintenance and repairs can be conducted quickly, without bleeding down the entire system.

Downtime worries? Problem solved.

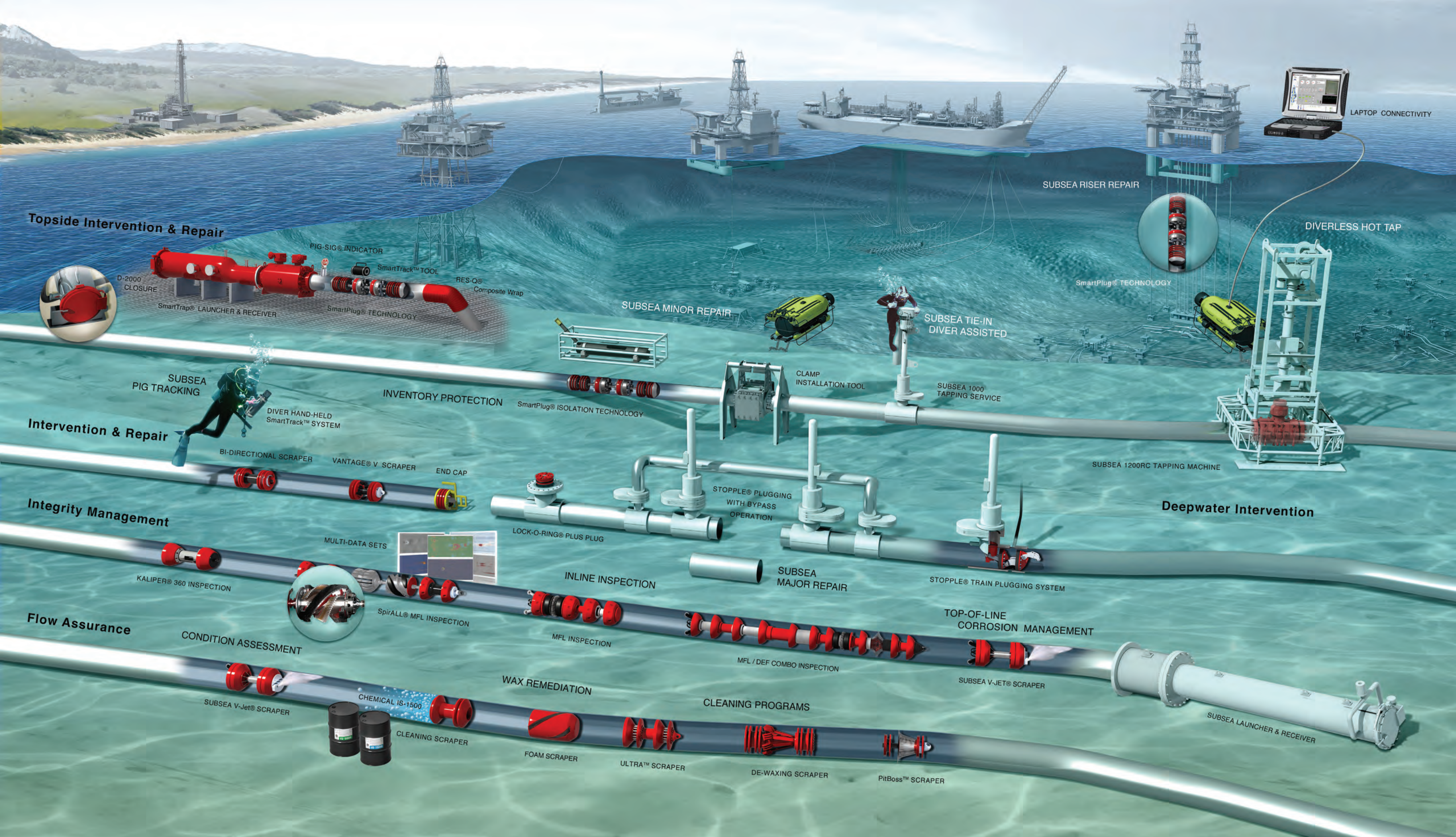
A pipeline under repair bleeds money with every passing hour. The solution? SmartPlug® isolation technology. Operated by remote control, the SmartPlug tool's "double-block and monitor" isolation capabilities ensure a safe, reliable pressure isolation.

One system, many applications.

TDW has used the SmartPlug® technology to maintain production while facilitating hundreds of operations like these:

- Valve, riser and jumper repair and replacement.
- Pressure testing and leak detection of risers and pipelines.
- Tie-ins of deepwater flow lines and pipelines.
- Abandoned platforms and by-passes.
- Isolation of flex joints for repair.
- Protection of pipelines and inventory during construction and overhead lifting operations.





Topside Intervention & Repair

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Integrity Management

Flow Assurance

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