



High integrity pressure protection and control

Get more from your existing subsea infrastructure with Trendsetter's high integrity pressure protection system (HIPPS). This retrievable safety system enables unparalleled cost and schedule efficiency to optimise your subsea projects and unlock marginal reservoirs.

Trendsetter's HIPPS module is powered by Proserv's field proven subsea control system. Offering unrivalled data speed, reliability and flexibility, the system provides the requisite monitoring, control and shutdown functions for HIPPS to prevent the over pressurisation of your subsea assets.

By combining Trendsetter's HIPPS with Proserv's HIPPS configured subsea control module (HSCM), we can offer operators increased flexibility in addressing varying pressure regimes between new wells and existing infrastructure, making it a viable and efficient solution for subsea-to-subsea tiebacks. Our unique partnership allows us to provide best-in-class solutions whilst still remaining independent.



BEST-IN -CLASS DESIGN

To ensure maximum reliability, Trendsetter's HIPPS design, manufacturing and testing meet SIL3 and API 170 and BSEE requirements.

Researched, developed, designed and manufactured in-house with industry-leading reliability, Proserv's controls are engineered to ensure zero obsolescence issues, past or future.

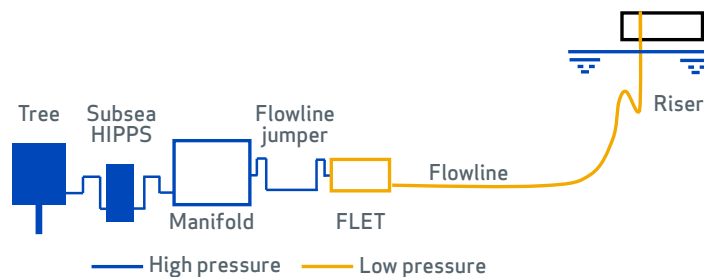
TOUGH TECHNOLOGY

Trendsetter's field flexible manifold design includes best-in-class ATV HIPPS shut down valves.

Proserv's HSCM is SIL compliant and fully configurable to meet the client's SRS for HIPPS systems.

FLEXIBLE APPLICATIONS

Adaptable for greenfield, brownfield and infrastructure led exploration to co-exist with already installed networks.



The complete HIPPS and controls package



HIPPS gets the most out of your existing subsea assets with unparalleled cost and schedule efficiency

New host facilities, flowlines and risers are often both cost and schedule prohibitive. With the HIPPS module, operators can utilise existing flowlines, risers and topside facilities that have some spare production capacity available but may not have a high enough pressure rating for a new, nearby reservoir or well. It's as simple as 'plug and play'.

- Designed, manufactured and tested to meet SIL3, API 170 and BSEE requirements for well based HIPPS modules
- Rated for up to 15,000 psi
- Equipped with Trendsetter Connection Systems to allow for easy field integration
- Provides peace of mind with dual barrier well control
- Provides an independent, fully autonomous means for protecting lower pressure downstream hardware
- Later in the reservoir life, the HIPPS module may be locked open or recovered and re-purposed for future applications
- Trendsetter can service the HIPPS worldwide and support offshore deployments

Technical details - typical configuration

Design specification	API 170
Maximum water depth	Up to 10,000 ft / 3,048 m
Rated working pressure (prod. bore)	Up to 15,000 psi / 1,035 bar
Design life	30 years
HIPPS SIF operation life	5 years
Nominal bore ID HIPPS SIF	5 in / 7 in
Production specification level	PSL 3G
Material class	EE/HH
Nom. temperature rating	-20°F to 250°F / -18°C to 121°C
Control system type	Proserv multiplexed electro-hydraulic MUX system

Trendsetter Engineering, Inc. is a privately owned oil and gas service company based in Houston, Texas which provides specialised subsea hardware and offshore service solutions globally, from exploration drilling through abandonment.



Dedicated control systems to meet the stringent safety requirements for high pressure environments

In the event flowline pressure downstream of the HIPPS exceeds the predetermined maximum allowable limit, the HSCM will safely shut down the system. At the heart of the HSCM's subsea electronics module is the Proserv open communication controller, which provides the operator with a transparent and flexible platform for both new and existing subsea tiebacks.

- Combines Proserv's proven Artemis 2G subsea electronics with Sensia's SIL rated card for safety applications, in accordance with IEC 61508 and 61511 standards
- System fully programmable to meet necessary SIL3 requirements for well based HIPPS modules
- HIPPS master control station (HMCS) powered by Rockwell control logix and Rockwell AADvance SIL rated interface for safety rated systems
- SIIS instrument and device integration with extensive diagnostic support
- Incorporates proven subsea valve technology with SIL certified Rotator DCVs

Technical details - typical configuration

Design specification	API 17F and API 170
Maximum water depth	10,000 ft / 3,048 m
Dual hydraulic supplies	15,000 psi / 1,035 bar HP 5,000 psi / 345 bar LP design pressure
Footprint	33.5" x 25.6" x 25.6" / L850 x W650 x H650 mm Height may vary depending on accumulation requirements
Weight	1,234.6 lbs / 560 kg in water 1,763.7 lbs / 800 kg in air Depending on functionality
Hydraulic functions	Up to 26 hydraulic output functions
Monitoring interfaces	Non critical I/O - SIIS L1, L2 & L3, Serial Safety I/O - DI, DO, AI (4-20mA) Serial

Proserv is an independent controls technology company. We improve the reliability, integrity and productivity of critical infrastructure with industry-leading controls technology.