

SenTREE HP

High-pressure completion subsea test tree

APPLICATIONS

- Subsea completions installation
- Drillstem testing and evaluation
- Reservoir cleanup
- Well intervention
- Well abandonment
- Well stimulation and fracturing

BENEFITS

- Prevents fluid spills during controlled and emergency disconnects
- Provides reliable, repeatable well control in a wide range of water depths

FEATURES

- Modular components for simple BOP configuration
- Full 6.375-in [162-mm], large-bore access to well
- Self-aligning latch mechanism
- Configurable emergency shutdown system
- Two independent well control barriers (ball- and flapper-valve combination)
- Secondary valve closure and disconnection feature for use in the event of an umbilical failure
- Multiple hydraulic and electrical through ports for tubing hanger running tool and downhole functions
- Slickline, wireline, and coiled tubing cutting capability

The SenTREE HP* high-pressure completion subsea test tree (SSTT) is the primary subsea well control solution for completion, flow testing, intervention, and other subsea well operations performed from a floating vessel in challenging environments.

This high-performance field-proven modular system consists of a ball valve module, an integral flapper valve and latch re-entry profile, a hydraulic latch module, and a retainer valve with integral bleedoff valve, which can be configured to suit the BOP stack and other subsea interfaces.

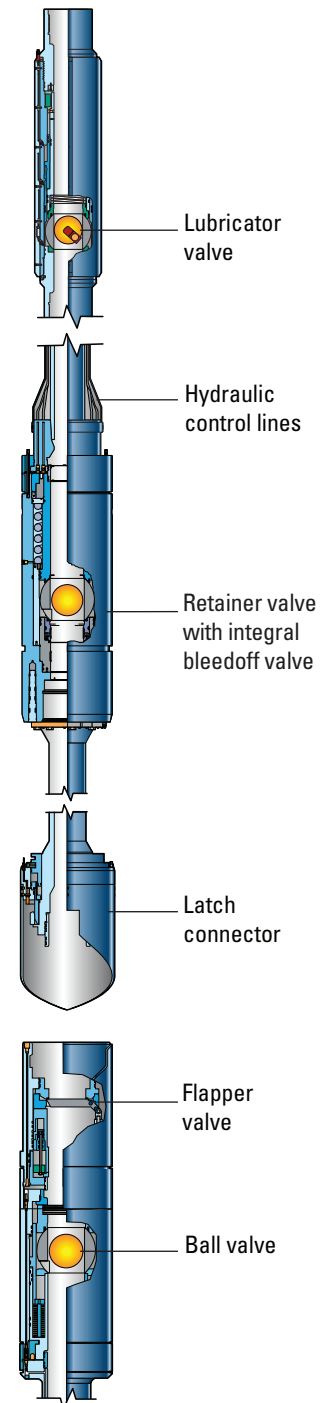
The SenTREE HP SSTT provides large-bore (6.375-in [162-mm]) well access, dual-barrier well control, and a reliable means to disconnect the completion landing string in the event of an emergency.

Two independently controlled barriers—a ball valve and a flapper valve—govern wellbore fluid flow at the subsea BOP. These fail-closed valves secure the wellbore if hydraulic control pressure is lost. If required, the ball valve module can be used to cut a variety of media, including slickline, wireline, and coiled tubing. The ball valve can cut 2.0-in OD coiled tubing (0.151-in wall thickness, 112,000-psi yield) in an emergency. An optional module can be added for increased cutting capability, if required. The retainer valve provides environmental protection by holding hydrocarbons in the landing string after disconnect.

Operating system options for the SenTREE HP SSTT support operations performed from anchored or dynamically positioned vessels in water depths ranging from shallow to ultradeep.

Multiple hydraulic and electrical ports allow customization of the SenTREE HP SSTT for

- control of tubing hanger running tool
- subsurface safety valve and completion equipment devices
- downhole chemical injection
- line integrity monitoring during running or retrieving operations.



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Specifications

Nominal OD, in [mm]	18.56 [471]
Nominal ID, in [mm]	6.375 [162]
Max. pressure, psi [MPa]	
Working	15,000 [103]
Test	22,500 [155]
Tensile rating, lbf [kN]	
At 0 psi	1,200,000 [5,340]
At 15,000 psi	500,000 [2,220]
Min. handling temperature, degF [degC]	-20 [-28]
Max. operating temperature, degF [degC]	
Design	350 [177]
Qualification	275 [135]
Service	NACE MR0175-2003
System certifications	Det Norske Veritas [†] DNV-OS-E101 NMD [‡] regulations of 4 September 1987, amended 2 March 1999 Det Norske Veritas' understanding of the implementation and interpretation of NPD [§] regulations of 3 September 2001 UK SI 1992: 2932; Regulation 5(1) API 6A

[†] Det Norske Veritas

[‡] Norwegian Maritime Directorate

[§] Norwegian Petroleum Directorate

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