

# SentTREE 3 Subsea Test Tree

Modular design enables integration with any subsea system and BOP

## Applications

- Well tests
- Well cleanup operations

## Benefits

- Configuration flexibility to meet specific requirements without custom systems for each operation
- Integration with any subsea system and BOP stack
- Safety and reliability improvements through standardization of modular components
- Reliable performance from proven technology, extensive testing, and 30-plus years of subsea experience
- Support by Schlumberger personnel from program design to project completion

## Features

- Reduced length and modular design
- High-pressure, high-temperature tested and qualified to full pressure and temperature range
- Ability to unlatch at full tension with an angle of up to 6°
- Backup mechanical unlatch
- Latch fishing profile and dedicated fishing tool
- Chemical injection below or at valve level

The SentTREE\* 3 subsea test tree (SSTT) system is a singular subsea safety solution for well test and cleanup operations from any floating rig.

This field-proven modular system, composed of a dual fail-safe ball valve–flapper valve assembly, a latch connector assembly, and a retainer valve, can be configured to any BOP stack.

The SentTREE 3 SSTT provides a 3.0-in [76.2-mm] wellbore access, dual-barrier well control, and a reliable, fast-acting means to shut in a well and disconnect 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. Sequential valve closure ensures that the flapper valve closes only after the ball valve is closed. The pump-through ability of the valve assembly permits well control if the hydraulic control pressure is lost.

If required, the ball valve can be used to cut a variety of media, including slickline, wireline, and coiled tubing up to 1¼-in OD. The retainer valve provides environmental protection by holding hydrocarbons in the landing string after a disconnect.

Control system options for the SentTREE 3 SSTT support operations in water depths ranging from shallow to ultradeep, enabling SSTT system disconnection in as little as 15 s. Control systems communicate via direct hydraulics or electrohydraulics, depending on the application and operating environment.

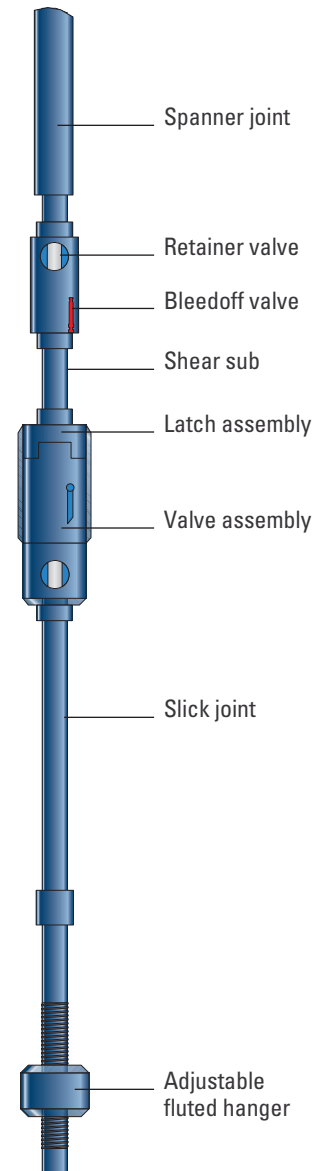
## Specifications

Nominal OD, mm [in]	330 [13]
Nominal ID, mm [in]	76 [3]
Max. pressure, MPa [psi]	
Working	103 [15,000]
Test	155 [22,500]
Tensile rating, kN [lbf]	
At 0 psi	2,313 [520,000]
At 15,000 psi	1,134 [255,000]
Max. operating temperature, degC [degF]	177 [350]
Service	H <sub>2</sub> S per ISO 15156-1, 2001, ISO 15156-2, 2002: Part 2, and ISO 15156-3, 2003: Part 3
Certifications	DNV-OS-E101 <sup>†</sup> , NMD No. 856 <sup>‡</sup> , PSA <sup>§</sup> , API 6A, 19th Edition, PSL 3

<sup>†</sup> Det Norske Veritas, Drilling Plant, October 2006

<sup>‡</sup> Norwegian Maritime Directorate (Regulations 4 September 1987, No. 856 concerning construction of Mobile Offshore Units, last amended 11 April 2003)

<sup>§</sup> Petroleum Safety Authority Norway [Regulations relating to the design and outfitting of facilities, etc., in petroleum activities (The Facilities Regulations), including Guidelines, 3 September 2001, last amended 22 December 2005]



SentTREE 3 subsea test tree.