

Veto™ 3" Subsea Safety Tree

PRIMARY BARRIER AND LANDING STRING UNLATCH SYSTEM FOR WELL TESTING OPERATIONS

OVERVIEW

As a part of the Halliburton premier Veto™ 3 Subsea Safety System, the Veto 3-inch subsea safety tree is a hydraulically operated dual "fail-safe closed" valve system designed as a primary well control barrier combined with a passively orienting latch mechanism. The subsea safety tree is a critical part of any landing string flowing hydrocarbons to a semisubmersible or dynamically positioned drilling vessel.

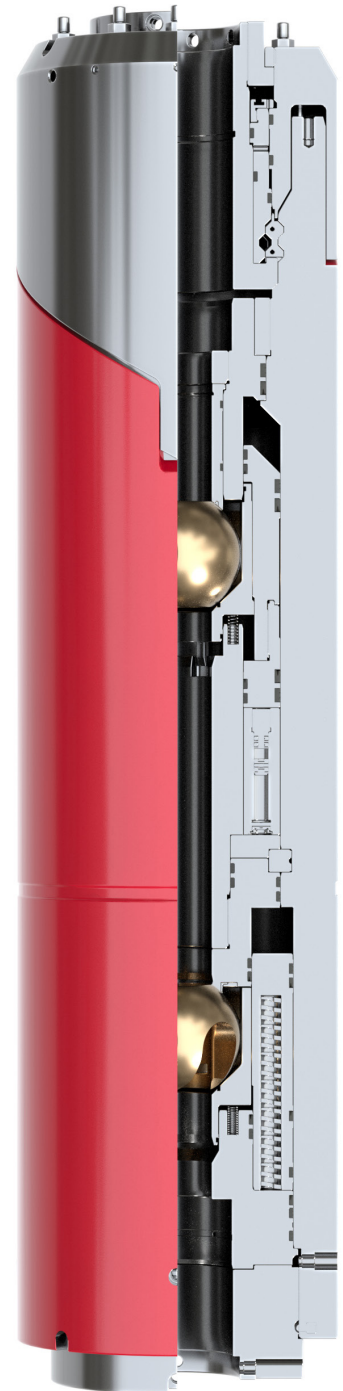
Deployed within the drilling blowout preventer stack, the subsea safety tree provides dual barrier well isolation, along with a means of disconnecting the landing string. Once unlatched, the subsea safety tree leaves the well with dual safety barriers until relatching and recommencement of required operations, which is a critical safety requirement in the offshore environment.

FEATURES

- » Dual "fail-safe closed" independently operated ball valves
- » Hydraulically operated latch with secondary mechanical unlatch feature
- » Passively orienting latch system
- » Ball valves provide full working pressure well isolation from below
- » Upper ball valve testable to full working pressure from above
- » Low-pressure pump through capability from above
- » Coiled tubing (CT) cutting capability
- » Chemical injection point between ball valves with dual check protection
- » Single-pass-through hydraulic port allows downhole function or chemical injection
- » Dual sealing barrier from bore for well isolation
- » Halliburton high-integrity tool joints
- » Design verified by third-party certifying authority

BENEFITS

- » Passive latch system provides positive latching, removing the need to rotate the landing string to achieve engagement, thus eliminating potential issues with landing weights and string torsion
- » Latch position indicator provides easily visible indicator to confirm latch status when passing through the rotary table
- » Provides ability to pump fluids through closed balls from above for well access if required
- » Upper seat assembly may be easily accessed without the need to remove the subsea test tree from the landing string assembly
- » Dual sealing elements installed in critical areas of well isolation to increase reliability
- » All connections are locked from rotation with the Halliburton lock mechanism, which allows each connection to be fully shouldered out, thus increasing overall strength without the need to back off connections for alignment
- » High tensile capacity helps enable safe deployment of heavy drillstem testing (DST) strings



HAL88804

Equipment Specifications

Nominal Tool Inner Diameter (in.)	3
Outer Diameter in. (cm)	14.00 (35.6)
Inner Diameter in. (cm)	3.00 (7.6)
Overall Length in. (cm)	59.25 (150.5)
Weight lb (kg)	2,187 (992)
End Connections	5-in. Stub Acme
Working Pressure psi (bar)	15,000 (1034)
Bore Test Pressure psi (bar)	22,500 (1551)
Control Chamber Test Pressure psi (bar)	18,750 (1293)
Tensile Load ¹ @ 0 psi lbf (kN)	900,000 (4003)
Tensile Load ¹ @ Working Pressure lbf (kN)	600,000 (2669)
CT Cutting Capability	1-3/4-in., .203 WT, 90 Ksi
Service Temperature °F (°C)	32 to 350 (0 to 177)
Applicable Standards	
API 6A	Specification for Wellhead and Christmas Tree Equipment
API 14A	Specification for Surface-Controlled Subsurface Valves

Notes:

¹ The values of tensile, burst, and collapse strength are calculated with new tool conditions, Lamé's formulas with Von Mises' distortion energy theory for burst and collapse strength, and stress area calculations for tensile strength.

- » These specifications meet NACE MR0175 requirements for all temperatures.
- » These ratings are guidelines only. Refer to the equipment data book for individual equipment specifications.

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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