

Description

The SST MODUtree® Subsea Test Tree is a modular assembly, designed to allow multiple configurations of the system. This allows for the incorporation of the MODUtree® into any Subsea BOP Stack regardless of ram configuration.

The three primary modules are the Hydraulic Latch, Upper Valve and Lower Valve. These will always be incorporated with a Shear Sub, Slick Joint and Hanger. However, the primary Modules can be incorporated into a single short module or alternatively be split into separated modules interconnected by the Shear Sub and Slick Joint.

The Latch Assembly is comprised of a Hydraulically Operated Lock Dog arrangement. In the event of hydraulic failure, the Latch Assembly can be activated by right hand rotation of the upper landing string. Should the Shear Sub be sheared in an emergency, a hydraulic fishing tool is available for release and retrieval of the latch assembly.

The Upper Valve Module is available as either a Failsafe Ball or Failsafe Flapper configuration to meet customer preferences and job application specifics. This module is independently hydraulically controlled and includes a mechanical closure spring to ensure closure in the event of hydraulic failure.

The Lower Valve Module is comprised of a Failsafe Ball Valve with both Wire Line and Coil Tubing cutting capabilities. This module is independently hydraulically controlled and includes a mechanical closure spring to ensure closure in the event of hydraulic failure. Hydraulic activation of the cutting mechanism is completed through the control umbilical. However, in the event of hydraulic system failure, the system can be activated by applied annulus pressure, either above or below the pipe rams.

All valves in the SST MODUtree® are designed to allow pump-through capability in the event of hydraulic failure to ensure that well kill operations can be performed at any time. The Lower Valve Module can, however, be tested from above by holding closure line pressure to the valve. This allows pressure testing of the upper landing string and latch seals after a disconnect, prior to opening the valves to the well bore.

Chemical Injection is possible either between or below the valves and incorporates a dual check valve arrangement. Real time surface readout of well bore pressure above and below the valves, annulus pressure, temperature at the valve and actuating piston position is available with all of the MODUTree® systems as an option.

Operating Specification

MIN ID	3.06 in.
MAX OD	16.5 in.
WORKING PRESSURE	15,000 psi
TEST PRESSURE	22,500 psi
TENSILE RATING	675,000 lbs.
SERVICE	H2S & CO2
TEMPERATURE RATING	-20°F to 350°F
CUTTING CAPABILITY	1-1/2 in. x 0.109 in. CT W/7/16 in. WL

The SST MODUtree® is designed and certified to ISO 13628-7, API 6A, DNV OS-E101, NACE MR 01-75 and is qualification tested to API 14A class 3S.

For more detailed technical specifications, drawings, operating envelope and global analysis data please contact our technical or sales personnel.

