

Well Flow Management

Well Testing | Well control

Surface Test Tree

The Surface Test Tree (STT) is designed to control direction of flow in and out of the well, allow running of various tools inside the string through coiled tubing or wire line, allow well kill, and to allow transition between the vertical test string and the surface test equipment.

The size and number of components in the surface test tree depends on the type of test being performed and the rig that is used.

The minimum equipment required is a lift sub, surface test tree block, swivel and crossover.

The STT incorporates a central body containing the following:

- Four gate valves – a master, a swab, a kill and a hydraulically actuated (normally closed) flow valve
- Flow & kill valves can be supplied with Fail-safe actuator
- A swivel situated below the central body to allow tubing rotation for manipulating down hole equipment
- A lifting sub to allow rig elevators to raise and lower the tree in the derrick

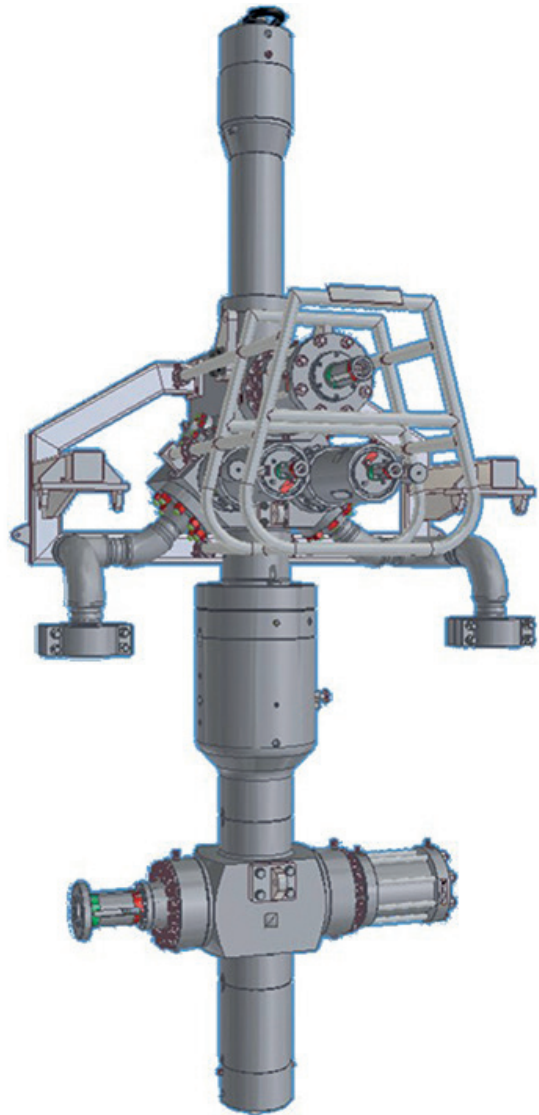
Additional valves, manual or actuated, can be added below the main assembly if required.

Applications

- Onshore & Offshore well testing
- Drill Stem testing
- Clean-up operation
- Well simulation

Features and benefits

- Additional components can be added to provide flexibility
- The flow valve is normally hydraulically actuated to the fail-safe close position and controlled from the E.S.D panel, thus ensuring a fast shut-down response time
- Third party certified in accordance with relevant design codes
- Provides immediate flow shut-in if downstream equipment fails
- Tensile load allows test string to be hung from the elevator
- Swivel allows manipulation of the string without rotating the STT
- Allow well intervention tools to be run into the well through the swab valve
- Automatically closes flow valve if control pressure lost





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Technical specifications						
Size inches	3-1/16	3-1/16	5-1/8	2-9/16	7-3/8	5-3/8
Working pressure psi (bar)	10,000 (690)	15,000 (1,034)	10,000 (690)	15,000 (1,034)	10,000 (690)	10,000 (690)
Working temperature °F (°C)	-20 to 250 (-29 to 121)	-20 to 350 (-29 to 177)	-20 to 250 (-29 to 121)	-20 to 250 (-29 to 121)	-50 to 400 (-46 to 204)	-50 to 400 (-46 to 204)
Connections						
Top	5-3/4"-4	5-3/4"-4	7-1/2"-4	5"-4	10"-4	8-1/4"-4
Bottom	Stub Acme	Stub Acme	Stub Acme	Stub Acme	Stub Acme	Stub Acme
Flow	Fig 1502	H4 - 27	Fig 1502	H4 - 27	Fig 1502	Fig 1502
Kill	Hammer Union	Techlock Hub	Hammer Union	Techlock Hub	Hammer Union	Hammer Union

Note: Designed and manufactured to API 6A (PSL 3), ANSI B31.3, NACE MR-01-75 (H2S), DNV 2.7.1 (transportation skid).

Weights and dimensions will vary depending on Test Tree configuration and installed sub components.

Other sizes, configurations and pressure ratings are available to meet most applications, for more information contact your local Expro representative or email welltesting@expro.com