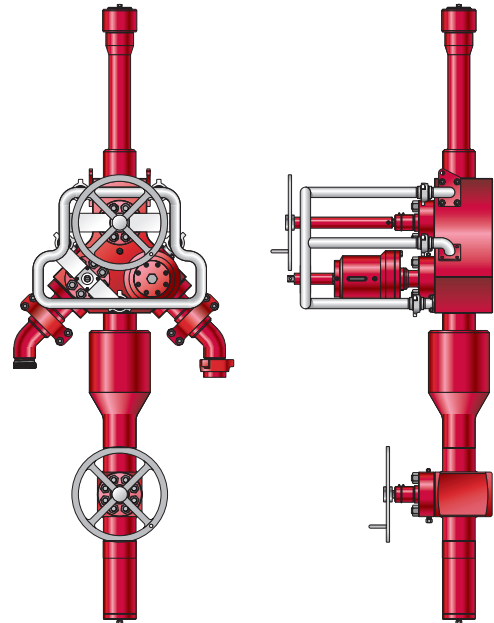




Surface Test Tree with Swivel

Weatherford's surface test tree, also called the flowhead, is located at the top of the test string and is the first piece of surface test/control equipment exposed to well effluent. The surface test tree supports the test string and is configured to facilitate and control flow into and out of the well. The flow-wing valve is typically fitted with a failsafe-close actuator linked to an emergency shutdown system (ESD) and provides immediate shut-in of the well at surface.

The kill-wing valve is normally operated manually, and is used during stimulation or well-kill operations. The swab valve enables live well intervention during well-test or production operations and is usually manually operated. The top connection on the handling sub is compatible with wireline lubricator and coiled-tubing equipment. A swivel is incorporated to ease make up of the flow and kill lines and allows rotation of the string after all surface lines have been made up to the surface test tree. This function is generally required for service packer setting operations and other downhole tools that require rotation to function. The master valve is located below the swivel to be effective in the event of a leaking swivel.



Applications

- Offshore and land operations
- Shoot and pull TCP
- Drillstem tests
- Well cleanups
- Production/well tests

Features, Advantages and Benefits

- Adaptable and compact design provides added flexibility and mobility.
- Low torque metal-to-metal sealing on all gate valves provides increased reliability and ease of operation.
- Hydraulic "failsafe" flowline valve with stem positioning indicator enhances safety.
- Protection frame on main block for manual and hydraulic valves improves durability.
- Swivel enables rotation of the test string for packer setting and disconnect operations.
- Four-point lifting sling and integral forklift pockets provide flexibility to handling and movement.



Surface Test Tree with Swivel

Specifications

	Model STT-10000	Model STT-15000
Size (in.)	3-1/16	
Maximum working pressure (psi/MPa)	10,000 69	15,000 103
Test pressure (psi/MPa)	15,000 103	22,500 155
Operating temperature range (°F/°C)	-20 to 250 -29 to 121	
Service conditions	H ₂ S/CO ₂	
ID (nominal bore) (in./mm)	3-1/16 77.79	
Tensile rating at 0 psi (lb/kg)	630,000 285,763	
Tensile rating at working pressure (lb/kg)	425,000 192,777	
Outside dimensions L × W × D (ft/m)	14.91 × 4.20 × 4.24 4.55 × 1.28 × 1.29	
Approximate weight (lb/kg)	4,800 2,177	
Flowline connection	3-in. Fig 1502 union male	3 1/16-in. API 16BX hub
Kill-line connection	3-in. Fig 1502 union female	
Top connection	6 1/2-in. 4 ACME-2G Box wireline quick union	
Bottom connection	5 3/8-in. 4 ACME-2G Box	
Applied codes	API 6A (PR1, PSL-2)	
	NACE MR-01-75	
	Material class - DD	
	Temperature class - P+U	
	DNV 2.7-3	
Basket outside dimensions L × W × D (ft/m)	15.09 × 6.56 × 4.61 4.60 × 2.00 × 1.41	
Basket approximate gross weight (lb/kg)	17,637 8,000	

Options

Other sizes and specifications available on request