

# **Tubing Spools** Models WFT-TCM, WFT-TC, and WFT-TC-60

Weatherford's WFT-TC-series tubing spools are production-wellhead designs built to accommodate a range of tubing-string sizes for single- and multiple-string completion programs. This specific product line offers diverse designs, enabling conversion of a single completion spool to a multiple-completion design with minimum expense. All models feature a straight bowl design with an industry-standard 45° load shoulder, which has been the preferred wellhead geometry over tapered bowl designs because of its ability to handle maximum pipe loads, provide precise hanger placement, and avoid stuck or wedged tubing hangers.

The WFT-TCM spool is compatible with single-string, no-orientation WFT-TC-series tubing hangers and packoffs and can be upgraded to a WFT-TC or WFT-TC-60 by adding alignment pins. The WFT-TC spool includes one alignment pin and is used with all WFT-TC-series tubing hangers and packoffs except for the WFT-TC-60 dual-split hanger. The WFT-TCM can be upgraded to a WFT-TC with the addition of one alignment pin. The WFT-TC-60 spool has two alignment pins and is compatible with all WFT-TC-series tubing hangers and packoffs.

This product line is available with a working pressure range of 2,000 to 15,000 psi (13.8 to 103.4 MPa), is suitable for temperature service conditions ranging from  $-75^{\circ}F$  ( $-60^{\circ}C$ ) to  $350^{\circ}F$  ( $180^{\circ}C$ ), and is available in material classes for standard service to extreme corrosive well conditions. The connection sizes and types for the bottom, top, and outlets can be specified with clamp HUB, flange end, or studded per industry and Weatherford standards.

A high-capacity 45° load shoulder suspends casing-load weights limited only by the load rating of hangers used in the bowl, ensures precise landing and location of hanger necks and seal sleeves, facilitates hanger removal for workover, and protects the seal area during drilling operations.

The straight bowl design handles a full range of hanger loads without modifications to the spool, resists sticking or wedging of hangers requiring costly removal, affords ready availability of aftermarket parts, and saves overall costs.



available with interchangeable seal assemblies, integral seals, and/or

metal-to-metal seals.

Externally threaded lockscrews for wear (-BP) and hanger retention (-L) have threads that are isolated from well fluids to prevent corrosion and facilitate maintenance.

Model WFT-TC has one aligning pin, and model WFT-TC-60 has two.

#### Wellhead Systems



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## **Applications**

- Water, oil, and gas wells
- · Onshore and offshore surface wellhead
- Suspending heavy pipe loads
- Single-string completions

- Multiple-string completions
- Low- to high-temperature working conditions
- General service
- Sour gas service

#### Features, Advantages and Benefits

- The WFT-TC series of tubing spools incorporates standard features and components, making them a universally accepted wellhead design in the oil and gas industry.
- This specific product line offers interchangeability of the primary products used in conjunction with multiple applications, thus providing a cost-effective product to install and maintain on offshore and/or onshore wells.
- Externally threaded lockscrews provide isolation of the lockscrew threads from wellbore fluids, preventing operational difficulties and costly repairs in the field.

#### **Options**

- Bottom preparations include the bit guide, integral FS-seal, P-seal, and metal-seal arrangements.
- Outlet options available are threaded, studded, and extended flanges.
- · Valve-removal threads are available for outlet preparations.

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