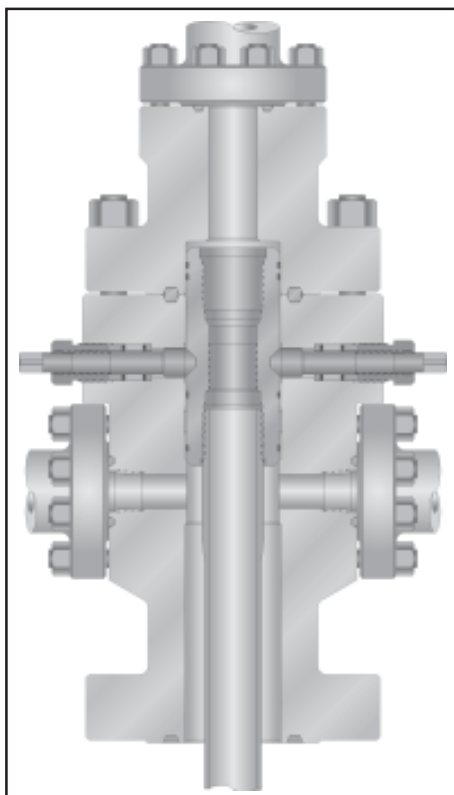
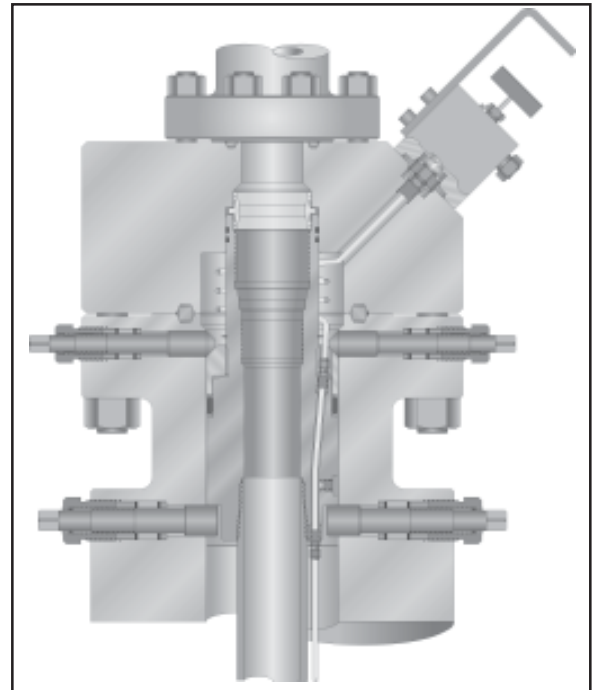


## Tension Tubing Hangers

The Tension tubing head and hanger system was designed to allow the tubing string to be lowered into the production casing in order to provide an overpull of the string weight prior to engaging the load pins in the landed position. This compensates for elongation due to temperature variations during the completion of the well to ensure that the tubing string is not exposed to buckling that can occur with conventional tubing hanger applications. Tension tubing hangers utilize an MRS metal seal between the hanger neck and adapter to isolate the production flow. A continuous control line feature is standard with the Tension tubing hanger system that allows the control line to exit through the adapter and be sealed in a specially designed exit block. The Tension tubing head and hanger system is available in applications up to 20,000 psi and all API trim levels.

### Additional Features:

- Fluted thru-bore Tension hanger available for liquid or N<sub>2</sub> type annular completions
- BOP slick joint utilized to maintain N<sub>2</sub> in annulus during hanger completion
- DHCV pressure controlled during completions



## Slim Line Tubing Hangers

The SL tubing hanger system is designed for use over TLC (Tubingless Completion) equipment. Once production through a larger tubing string begins to slow, the operator may choose to install a smaller tubing string in order to continue lifting fluids. In this application, the SL tubing head can be installed between the TLC adapter and lower master valve. The SL tubing head features a retractable tag pin that allows for full opening bore for passage of back pressure valves and ensures positive tubing hanger location. The SL tubing hanger is landed through the tree, secured in place and may begin taking production. If so desired, the operator may also choose to utilize a crossover adapter in order to install a smaller bore tree over the installed SL tubing hanger.