Multiple-Stage Cementing Equipment

With the use of multiple-stage cementing tools, cement slurry may be placed at selected intervals around the casing string. Multiple-stage cementing tools may be used in the following circumstances:

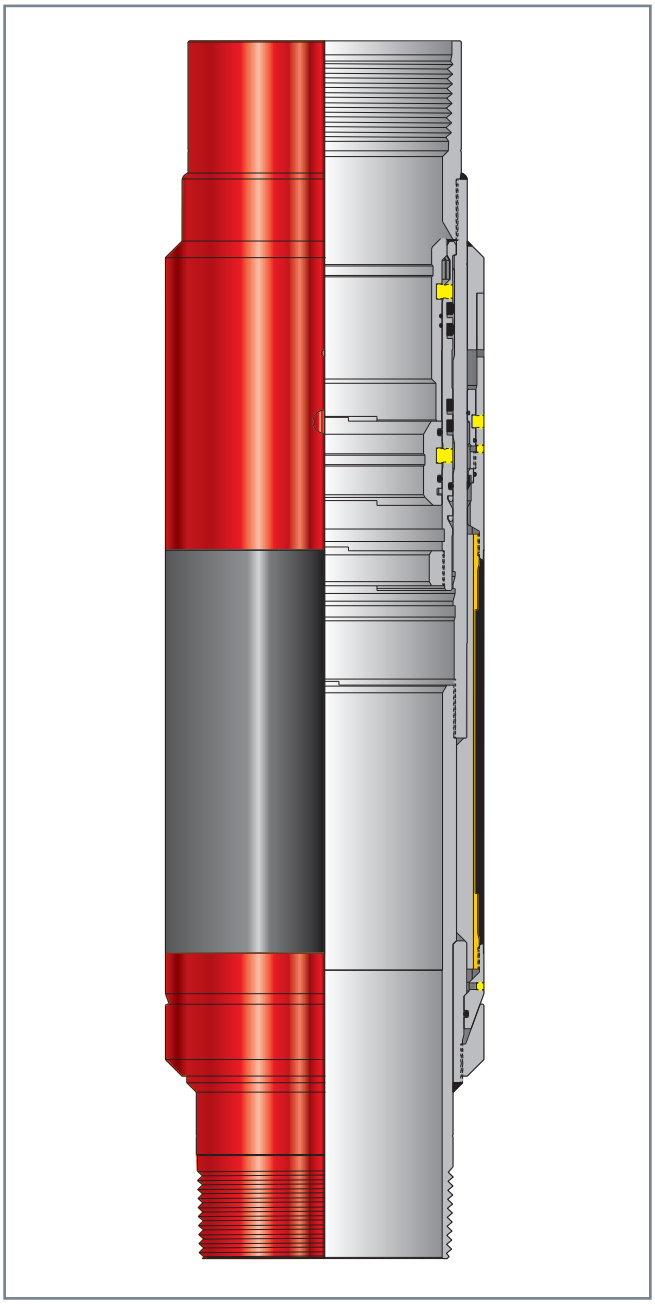
- In wells where the hydrostatic head of the cement is greater than the formation pressure, resulting in a breakdown of low-pressure formations
- In deep, hot holes where time to pump the desired quality and quantity of cement is insufficient
- Where only certain portions of the wellbore require cementing
- Where different blends of cement must be safely pumped in the wellbore
- In horizontal wellbores where the bend radius of the well requires cementing
- Two to three stages can be cemented
- All Halliburton stage cementers are rated for continuous service up to 275°F (135°C)

Multi-Stage Inflatable Packer Collar (MSIPC)

The multi-stage inflatable packer collar is a combination of the reliable plug-operated Halliburton Multi-Stage Cementer tool and a solid metal bladder casing inflation packer. This economical tool provides controlled packer element inflation through the stage-tool opening seat, eliminating hydraulic valve bodies normally used with inflatable packer elements. The metal bladder tools are recommended for use when setting in a gauge hole in a hard rock formation or inside casing.

Features

- Can hold up to 4,000 psi differential
- Standard tools can be used in sour gas environments
- Tools are operated with standard free-fall plug sets or displacement-type plug sets
- MSIPCs are considered PDC drillable when used with a composite opening plug
- Available in plug-operated versions only



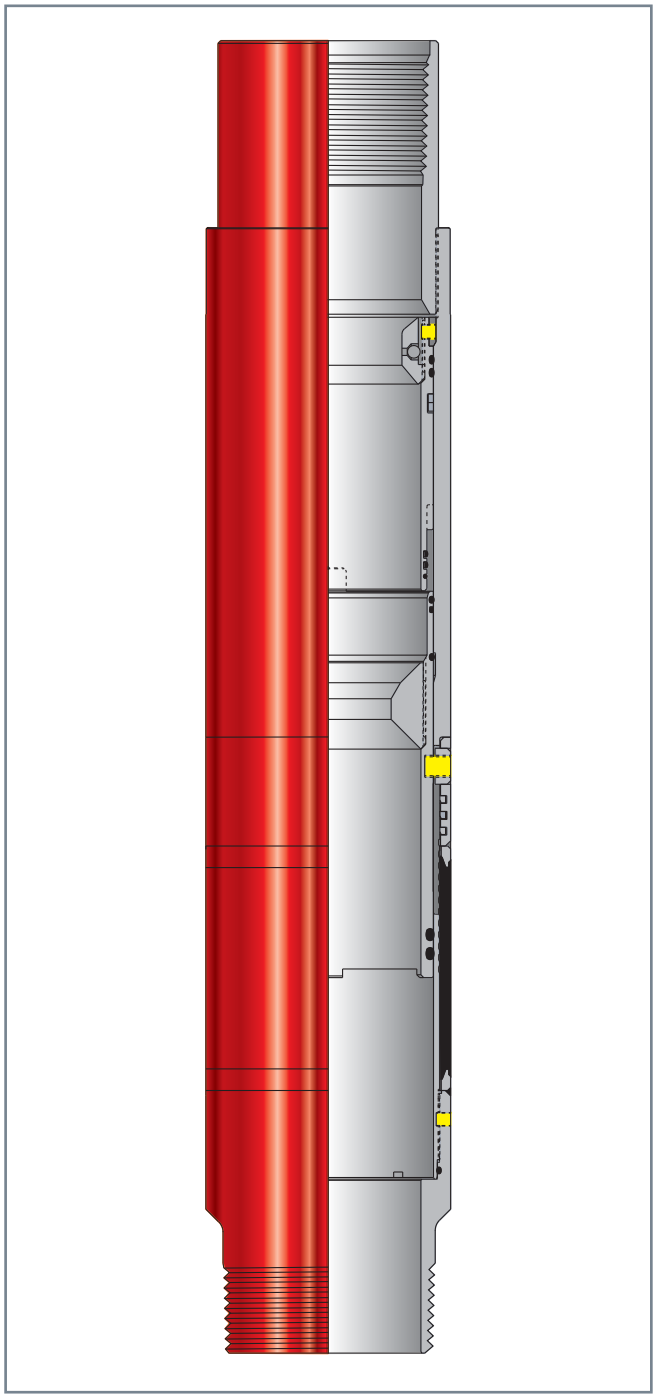
Plug-Operated Multi-Stage Inflatable Packer Collar

Multi-Stage Packer Cementing Collar (MSPCC)

The Multi-Stage Packer Cementing Collar (MSPCC) is a stage cementer with an integral, solid rubber, compression-set packer element. Like the other stage-cementing packer collars, the MSPCC is used either to prevent gas migration or to support the hydrostatic pressure of the cement with a packer. The compression-set (or mechanical) packer elements, however, do not hold as much differential pressure as inflatable elements and are sensitive to hole size.

Features

- More economical than inflatable packers
- Can hold up to 1,000 psi differential pressure
- The recommended hole size applications are smaller than with inflatable tools
- Tested for wells with bottomhole temperatures of 200°F (93.3°C) or less
- Tools are operated with standard free-fall plug sets or displacement type plug sets
- MSPCCs are considered PDC drillable when used with a composite opening plug
- Available in plug-operated versions only



Multi-Stage Packer Cementing Collar

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