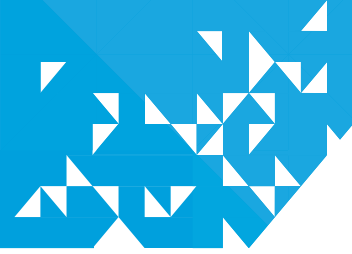


# Stage Cementing Collar: Composite Seat 2-Stage Mechanical



Stage Cementing Collars allow operators the flexibility they need to cement casing strings in two or three stages to minimize loss of cement to weak formations and allow improved placement and quality of the cement pumped into the annulus.

## 500-CI – COMPOSITE SEAT MECHANICAL STAGE COLLAR

The composite seats of the 500-CI Mechanical Stage Collar allows for quick drill out with a conventional BHA, or with a bent sub, mud motor and PDC bit, saving valuable rig time. The robust double snap ring locking mechanism ensures the tool does not open after it is closed and is able to withstand an upward force of over 100,000 lb. Fully composite systems available consist of Stage Tool, Plug System, Contingency Collar with Cone, Cancellation Cone, and Float Collar.

- Composite internal seats with a unique anti-rotation system enhance drill out with PDC and roller cone bits
- The patented anti-rotation system for the steel inner-sleeve does not require holes through the tool body
- Single inner-sleeve design eliminates pressure traps and increases reliability
- Steel inner sleeve locking lugs prevent premature closing of the tool until the closing seat is sheared and shifted by the closing plug
- Dual high-pressure seals are engaged above and below the stage collar cementing ports when the inner sleeve is shifted to the closed position
- API box threads are integrated into the body of the stage tool
- Short close tolerance seal length allows operations within well curvatures with dog leg severity (DLS) up to 12° per 100 ft.
- The high density and length of the composite opening cone assures quick descent, even in high density drilling fluids
- High pressure seals are available for pressures above 10,000 psi
- Pump-down opening plug systems are available for highly inclined wells
- Contingency Landing collars with cemented composite inserts allow for the use of 3-Stage free fall opening cones for setting packers
- NP Float Collars allow the use of standard first stage cementing plugs for setting packers and testing casing up to 5,000psi are available in sizes 7.00" and above
- Shut-off plug systems in all available sizes for setting casing packers and testing casing at high pressures
- US Patent 9816351 B2

